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Activities of the Center for Vocational and Technical Education at The Ohio State University are reported for the third quarter of the second year of its 5 year contract. The activities are reported under the headings of (1) Staffing, (2) Research and Development Projects, (3) ERIC Clearinghouse on Vocational and Technical Education, (4) Publications, (5) Research Library, (6) Leadership Development, (7) Additional Contracts and Grants, (8) Staff Development, (9) Meeting With Associate Commissioner, Bureau of Research, (10) Advisory Committee Meeting, (11) Center Contributions to Research and Development Activities of Other Agencies, Groups, and Organizations, and (12) Facilities. Some of the 15 continuing research and development projects reported are: (1) A National Survey of the Training and Functions of Guidance Counselors in Vocational Education, (2) Implications of Women's Work Patterns for Program Development in Vocational and Technical Education, (3) Development of Facility Planning Guides for Vocational and Technical Education Facilities, (4) Individualizing Educational Materials in Vocational Education, and (5) National Seminar on Vocational-Technical Teacher Education. Eleven appendixes include detailed information such as publications and major presentations of The Center and its staff. (HC)

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PROGRESS REPORT
Project No. 7-0158
Grant No. OEG-3-7-000158-2037

THE CENTER FOR RESEARCH AND LEADERSHIP DEVELOPMENT IN VOCATIONAL AND TECHNICAL EDUCATION

The Ohio State University

April 16, 1968 through July 15, 1968

U. S. DEPARTMENT OF
HEALTH, EDUCATION AND WELFARE

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Robert E. Taylor

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The Center for Vocational ~~and Technical~~ Education,
The Ohio State University

Columbus, Ohio

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PROGRESS REPORT

ON

THE CENTER FOR RESEARCH AND LEADERSHIP DEVELOPMENT IN VOCATIONAL AND TECHNICAL EDUCATION

April 16, 1968 through July 15, 1968

Introduction

This publication reports the activities of The Center for Vocational and Technical Education at The Ohio State University during the third quarter of the second year of its five-year contract, April 16, 1968 through July 15, 1968.

Staffing

Mr. William A. Losoncy is The Center's new Assistant to the Director. In this position he will be responsible for management of finances, facilities, equipment, and non-professional personnel. He has his M.B.A. from The Ohio State University, and his master's thesis dealt with research management.

Dr. Jerry Salomone, Associate Professor of Sociology at Louisiana State University in New Orleans, is spending the summer here at The Center working with Dr. Albeno Garbin on the "Transition From School to Work: Worker Adjustment" project.

Mr. Harold Rowe has accepted the position of Health Occupations Specialist and will begin work on September 1, 1968. This is a new position with The Center. Mr. Rowe has been a research associate in occupational studies with the Kentucky Research Coordinating Unit and is a former member of the University of Pennsylvania faculty.

Dr. Joseph P. Arnold, who is presently Associate Professor of Vocational Education and Practical Arts at the University of Michigan, has accepted the position of Specialist in Technical Education effective August 15, 1968.

Dr. Herschel Lester will begin his new duties with The Center beginning August 1, 1968. Dr. Lester has been appointed as Research Specialist. He was formerly Director of Research in Vocational Education at the University of Georgia.

Arrangements have been completed for Dr. William Drake, Associate Professor at Cornell University to spend his sabbatic here at The Center. Dr. Drake will assist with The Center's project on "Individualized Instruction and Performance Goals in Agricultural Education."

Three of our visiting staff members who have been here on sabbatical leaves have returned to their respective institutions. They are Dr. Wilbur Ball, Professor of Agricultural Education, Fresno State College, Fresno, California; Dr. Elizabeth Ray, Associate Professor of Home Economics Education, Pennsylvania State University, University Park, Pennsylvania; and Dr. Margaret Brady, Chairman and Professor of Office Education, Southern Illinois University, Carbondale, Illinois.

Three of our research associates completing their Ph.D. degrees during the summer quarter have elected to remain with The Center during the coming year. They are: Mr. Joel Magisos, Mr. Charles Doty and Miss Louise Vetter. Mr. Magisos will assist as Information Specialist with the ERIC Clearinghouse. One of his primary duties will be working with the State Research Coordinating Units to implement a national network of the dissemination of vocational and technical education research. He will also provide leadership in information analysis, and the development of materials and programs to acquaint users with the ERIC system. Mr. Doty will serve as Assistant Investigator with Dr. Calvin Cotrell on Project 44--"An Evaluation of the Application of Micro-teaching in Vocational and Technical Teacher Education." Miss Vetter will serve as Project Director on "Women In the Work Force - Further Development and Field Testing of Curriculum Materials."

Other research associates who will be completing their degrees will be taking positions with the following institutions and organizations:

Mr. Walter Bailey, Dean of Students, Macon Junior College, Macon, Georgia

Mr. O. J. Byrnside, Jr., Executive Director, National Business Education Association (a department of the National Education Association) Washington, D. C.

Mr. Don Herring, Assistant Professor of Agricultural Education, Texas A. & M. University, College Station, Texas

Dr. Cecil Johnson, Coordinator for Area Vocational Schools, State Department of Education, Columbia, South Carolina

Mr. Lloyd DuVall, Assistant Professor, College of Education, University of Rochester, Rochester, New York.

New research associates who have been employed are:

Beverly Archer, Assistant Professor and Teacher Educator, Florida A. & M. University, Tallahassee (Employed June 18, 1968)

Garry Bice, Head, Department of Agricultural Education, University of Vermont (Began work on June 17, 1968)

J. David McCracken, Vocational Agricultural Instructor, Charles City Community Schools, Charles City, Iowa (Employed June 17, 1968)

Research and Development Projects

Development of a Model to Evaluate State Programs of Vocational and Technical Education (Project 20)

The purpose of this project is to develop and field test an evaluation system for use by states in assessing their programs of vocational and technical education as a basis for program planning and development. The system is intended to support a state's assessment of its total occupational education and training effort in terms of national and state interests, student benefits, and manpower requirements.

Center staff, together with jointly-employed evaluation specialists from New Jersey, Kentucky, and Colorado, constitute the project team which has primary responsibility for system development. In addition, several advisory committees, individuals representing many disciplines both within and outside of education, and specialists from The Center have been repeatedly involved in the project and provide continuing guidance and assistance. The project team, in cooperation with its advisors, is responsible for developing a set of state vocational education program goals; for designing a model system for self-initiated evaluation of state programs; for structuring the data systems and formulating procedures needed by state staffs to effect the evaluation; for conducting a tryout of the system in three state departments and revising the system as necessary; and for disseminating the results of the project through training seminars for state department personnel from all interested states.

During this quarter, field tryouts of the data system were completed. Data availability gaps were identified in the participating states and suggestions were made to project staff for revising elements of the existing data system. A methodology was devised for utilizing obtained data for program planning. A total validation of the instruments and procedures was modified because of difficulties in securing all data required by the system.

During the next quarter, the three states will be visited to obtain reactions to the total model including the data package and the program planning methodology. Project staff will obtain goal and performance objective priorities from each participating state.

State Department of Education Leadership in Vocational Education: A Study of Its Current Status, Projected Needs, Evolving Role, and Recommendations for a Training Program (Project 21)

The major purpose of this project is to develop and test programs and materials designed to train people for leadership of vocational-technical education in state departments of education. Activities have been organized into three partially concurrent phases.

Phase I was an empirical investigation of the training experience and numbers of present leaders in state divisions of vocational education, of the personnel policies and practices affecting them, and of attracting and retaining qualified personnel. Data were obtained from 31 states and all USOE Regions in structured interviews with state directors of vocational education and with head state supervisors. Data also were obtained from qualified leaders who had left state positions recently as to the reasons for and conditions related to their departures. Results of this study are presented in a report now in press: Rice, D. C. Professional Personnel in State Divisions of Vocational Education: Policies, Practices, Requirements.

Phase II developed a description of the future roles of state departments of education and their vocational divisions. Eight social scientists prepared background papers describing forces and trends determining changes in role requirements and identified specific implications of these influences for education. These papers and three others synthesizing their implications were the basis for an intensive conference in which the social scientists and educational practitioners examined the emerging roles of state departments of education and divisions of vocational education. All of the papers and a summary of the conclusions of the conference were presented in a report: Rice, D. C. & Toth, P. E. (Eds.) The Emerging Role of State Education Departments with Specific Implications for Divisions of Vocational-Technical Education.

Phase III, in progress, is developing two training packages to meet needs selected from those identified in Phases I and II. One of these packages will provide simulation exercises for assistant state supervisors in problems of human relations, decision-making, and communications encountered in instructional evaluation, curriculum development, and in-service education. Materials are being developed using real background data and critical incidents provided by state department personnel and are being pilot-tested in several workshops as developments proceed.

Next quarter will be devoted to completion of materials and to arrangements for their evaluation and demonstration in early Spring 1969. The second training package is being developed to teach the concepts, techniques and practice of Planning, Programming, Budgeting Systems (PPBS). Extensive materials were reviewed by 22 outside experts in phases of PPBS and by senior staff members at The Center.

Next quarter, materials will be revised, reviewed again by PPBS experts, and pilot-tested during a two-week institute. Plans will be completed for a larger scale trial of the materials through a National Institute in PPBS for vocational teams from state departments to be held at The Center in the Fall of 1968.

The Problems and Meanings Of Occupational Goal Development of Disadvantaged Junior High School Students (Project 23)

This exploratory study was designed to investigate the vocational maturity of junior high school students and their perceptions of school, work, family, peers and self as these are related to personal characteristics of the students (e.g., grade, sex, academic achievement) and to selected characteristics of their schools and communities. One "disadvantaged" and one "non-disadvantaged" school was selected in each of four communities located in different geographical regions (Appalachia, South, Eastern Seaboard, West). Seventh and ninth grade students (total sample about 2400) in each of the eight selected schools completed the Attitude Scale of Crites' Vocational Development Inventory and a specially designed Student Perception Inventory. Teachers completed a brief open-end questionnaire on their perceptions of disadvantaged students. Various other data also were assembled on characteristics of the schools, the communities, and the students.

Data analysis and a first draft of the final report were completed during this quarter. The draft will be reviewed, edited, and submitted to press during the next quarter.

A National Survey of the Training and Functions of Guidance Counselors in Vocational Education (Project 24)

In response to the recommendations of the 1966 National Seminar on Guidance for Vocational Education sponsored by The Center, this study was designed to produce a description of the present status of vocational guidance, to provide "bench mark" data on important aspects of guidance programs with which future status assessments might be compared, and to identify some programmatic guidelines to improve vocational guidance. This survey was more comprehensive than previous surveys since it included a national sample of guidance programs, examined all major types of secondary schools, and collected data from all types of key individuals.

Approximately 6,500 administrators, counselors, teachers, students, and parents from 439 high schools (including both rural and urban academic and comprehensive schools, as well as urban vocational and area vocational schools), distributed through all U.S.O.E. regions of the country, responded to questionnaires designed for this study. Although a special questionnaire was designed for each type of respondent, a number of items were common to all questionnaires so that responses of different types of respondents could be compared. Results were tabulated and analyzed with respect to: the roles and functions of guidance counselors; services provided by the guidance programs; training of counselors; student-counselor ratios; students' unmet guidance needs; the differences and similarities of reports and assessments by different types of respondents; and the differences between types of schools. Recommendations for improvement of guidance programs also were developed.

Work on this project will be completed with publication of the final report (Campbell, R. E.) Vocational Guidance in Secondary Education: Results of a National Survey. now in press.

The Modification of the Perceptions Held by Disadvantaged Youth Toward Office Work (Project 29)

The purposes of this study are (1) to develop and test an educational program designed to modify perceptions held by disadvantaged youth regarding office work so they may become successful office workers, and (2) to develop methods and materials for preparing office education teachers to work with disadvantaged youth. It was planned that specially developed scales of perceptions of office work would be developed, tried out, and administered to disadvantaged students, non-disadvantaged students, and office workers with less than three years of experience. Results would be used to develop a preliminary program and materials for disadvantaged students and a program of teacher training. The two programs and their materials then would be field-tested, revised and finally, made available to interested teachers and teacher educators through summer institutes and Center publications.

Last quarter's activities included (1) a follow-up of teachers who participated in the 1967 Hunter College Workshop to ascertain the extent to which the methods and materials developed at the workshop are being implemented, (2) collection and analysis of data resulting from field tests of the materials developed at the 1967 Hunter College Workshop, (3) a preliminary review of a study of advantaged and disadvantaged rural high school girls' perceptions of office work, and (4) institutes at Temple University, San Francisco State College, and Hunter College to prepare in-service and pre-service materials for teachers of disadvantaged youth.

During the next quarter the directors of the Temple University, San Francisco State College, and Hunter College institutes will each submit to The Center a publication containing (1) a report of the institute and (2) materials developed by institute participants for use in preparing teachers of disadvantaged youth. The institutes' publications will be synthesized into a single Center publication which will be made available to teacher educators and state and city supervisors.

Also to be prepared next quarter is a technical report which will include (1) the findings of studies of the perceptions of urban and rural disadvantaged youth toward office work and (2) a final report on the results of the field tests of the materials developed at the Hunter College Workshop in 1967.

Implications of Women's Work Patterns for Program Development in Vocational and Technical Education (Project 30)

This project was intended to derive implications for vocational and technical education and guidance programs from the employment patterns of American women, as revealed by existing demographic data, and from the occupational and educational plans and the work attitudes of girls not yet in the labor force.

A report of the first part of the project (Lee, S. L. et al, Implications of Women's Work Patterns for Vocational and Technical Education) on women's participation in the labor force and the conclusions reached by a work conference and a companion bibliography (Lee, S. L. et al, Implications of Women's Work Patterns for Vocational and Technical Education: An Annotated Bibliography) were distributed to teacher educators, state supervisors, selected local directors and other appropriate persons.

In the second phase of the project, a questionnaire was developed to identify the occupational plans, educational plans, work attitudes, and significant correlates of these plans and attitudes of high school senior girls. Correlates which will be examined include: knowledge of the world of work; employment experience; non-vocational educational experiences; mother's work experience; and occupation, education, and earning aspirations. Family income level and place of residence (metropolitan-non-metropolitan) will be included by the selection of the sample for the major study. Type of school (comprehensive, general-academic, vocational-technical) has been included as a variable in the selection of the sample for the major study. Consideration of the attitudes of "significant others" has been dropped due to question format except for a few items in the attitudes toward work scale.

Collection of the data for the final study was completed. The data were processed and analysis was initiated. Drafts of tables for the final report were prepared. Work on the introductory and methodological chapters was continued. A draft of a topical outline for the curriculum unit with major concepts and generalizations, examples of behavioral outcomes, learning experiences, evaluation procedures, and source materials was developed, reviewed by the total project staff and revision work started.

During the coming quarter, the final draft of the project report will be completed and submitted to Center publication procedures. A final form of the topical outline with concepts and generalizations will be prepared for the curriculum unit. Examples of behavioral outcomes, evaluation procedures, and source materials will be assembled.

Experimental Attempts to Improve the Adjustment of Vocational Trainees to Supervision (Project 34)

The present research is designed to test the hypothesis that maladjusted vocational students will be rated by their supervisors as responding more favorably to supervision after training than before. Training consists of five sessions, each 40 to 50 minutes in duration. In each session, a motion picture depicting a carefully defined pattern of supervisory behavior is shown. The movie is used as a basis for group discussion designed to help the trainees understand the "hows" and "whys" of supervisory behavior. The five patterns of behavior are entitled Considerateness, Structuring Expectations, Tolerance of Freedom of Action, Production Emphasis, and Representation.

Three vocational high schools (two in Ohio and one in West Virginia) cooperated in the research. Small groups consisting of four or five well-adjusted and four or five poorly adjusted students saw the movies and engaged in discussion. Ratings of their adjustment to supervision were obtained before and after discussion. Equal numbers of control subjects were rated at the same time but did not engage in discussion.

This quarter was spent in scoring data, gathering forms, analyzing data, and drafting a report of findings. The manuscript will be completed next quarter.

Development of Facility Planning Guides for Vocational and Technical Education Facilities (Project 36)

The purpose of this project is to develop, evaluate, and distribute a series of manuals or guides to be used in deriving specifications for vocational and technical education facilities from an analysis of educational requirements.

Initial criteria for the scope, sequence and content of the guides were developed by the project staff working with a group of local specialists in a series of seven conferences. A group of nationally known experts in architecture, school plant planning, and vocational education then reviewed the material and a final set of criteria were established.

A model guide for planning facilities for occupational preparation home economics programs was developed by the project staff. After extensive internal and external evaluation by personnel at the national, state, and local levels, the guide underwent final revision preparatory to printing and distribution.

During this quarter, 12 additional facility planning guides in selected subject areas were produced. Following the format established for the initial home economics guide, contracted specialists prepared guides in the vocational and technical subject areas of Animal Science Technology, Business Education, Data Processing, Dental Hygiene, Dental Laboratory Technology, Dental Assisting, Machine Trades, Medical Assisting, Medical X-Ray Technology, Medical Secretary, Metallurgy, and Electrical Technology. Two additional guides are scheduled for early completion: One in Auto Mechanics; one general guide for overall vocational and technical education facility planning regardless of educational programs to be offered. Most of the guides have or are being evaluated for revision and preparation for printing. All guides should be available from The Center by late 1968.

A one-day training program in the use of the facility planning guides is planned for the annual American Vocational Association meeting to be held in Dallas during the week of December 9. The meeting will be open to all persons who specialize or have an interest in the process of planning for vocational and technical education facilities.

Individualizing Educational Materials in Vocational Education (Project 38)

This project aims to develop and evaluate self-instructional materials in agricultural machinery, agricultural supply, and ornamental horticulture from which teachers may assemble curriculum packages tailored to the needs, interests, and capabilities of individual students. It is intended also that the techniques and format developed to individualize these materials will be adaptable to materials in other vocational areas. A review of the literature on individualizing instructional materials was started with special attention being given to theories of learning, behavioral statements of objectives, and factors related to developments of individualized materials in diverse vocational areas. Research specialists in communications were consulted concerning alternative techniques for individualizing materials. With the consultation of teacher educators from four states who specialize in curriculum materials, a prototype package then was developed for ornamental horticulture using the instructional modules in horticulture developed by a previous Center study (OE-5-85-009: A Determination of Needed Adjustments and Extensions in the Curricular Patterns of Vocational Education in Agriculture). These prototype materials were tested during May, 1967, with a high school horticulture class. Results were used to revise the prototype set and to guide development of additional materials. Module Number 9 (Fertilizers, Sales and Service) and Module Number 4 (Agricultural Salesmanship), both from the previous project, provided the starting material for development of two sets of individualized material in agricultural supply by a distributive education coordinator with sales experience.

The materials which were tested in the schools during the past quarter were evaluated as to their acceptance and appropriateness. A questionnaire was completed by each teacher who attempted to use the material and the results were tabulated by The Center staff. The first draft of a report concerning the evaluation was initiated and will be put into final form during the next quarter.

An Evaluation of the Application of Selected Teacher Education Technique Variables Involving Videotape Recording and/or Micro-teaching in Vocational and Technical Education (Project 44)

The project intends to develop, evaluate, and demonstrate applications of videotape recording and micro-teaching in the development of teaching skills by vocational and technical teachers. The project is planned in four phases. The first phase is devoted to preparations for the central work of the project. In phase two, applications will be developed and evaluated under laboratory conditions for those teaching skills selected as necessary in vocational-technical teaching from the larger set considered by the Stanford University group to be important in academic subjects. Phase three will develop and evaluate applications of priority teaching skills which are unique to vocational-technical education. The fourth phase will test the applications developed in the preceding laboratory work for efficiency and effectiveness under field conditions and provide demonstrations of successful applications.

During this reporting period, two experiments were conducted: one for phase three and one for phase four. The phase three experiment tested the relative merits of three different teacher education techniques. Materials were prepared for teaching and evaluating how to demonstrate a manipulative skill. Thirteen experienced teachers representing four vocational services (agriculture, business education, home economics, and trade and industrial education) and forty-eight high school students participated. One hundred twenty-nine micro-teaching lessons were videotaped and evaluated during the data collection for the experiment. Some role models of teaching skills were generated as a by-product of the videotaping. Key punching of the data for the experiment was completed. The phase four activity was a field test to demonstrate the relative advantages of videotape feedback and teaching high school students in a micro-teaching application compared with no videotape feedback and peer teaching in the teaching experience portion (2 weeks) of a conventional pre-service vocational distributive education methods course (5 weeks in length) offered by the College of Education at The Ohio State University. Twenty-seven distributive education teachers participated. Fifty-four teaching sessions were videotaped and evaluated during the data collection for the experiment.

During the quarter ending October 31, 1968, the data on phases one, two and three will be processed and analyzed. Reports will be prepared on these three experiments, field testing of videotape recording and microteaching in a pre-service workshop for trade and industrial teachers will be conducted and the planning will be completed for future laboratory experiments and field tests.

Common and Unique Elements of Vocational and Technical Teacher Education (Project 47)

This project proposes to structure an efficient, effective, and relevant model curriculum for vocational and technical teacher education from explicit analysis of the capabilities required for successful teaching. Common and unique capabilities in professional education will be identified for seven service areas through objective occupational analysis. Priorities for identified capabilities will be established using the critical incident technique. Model programs for teacher education institutions then will be designed on the basis of the results of these analyses.

During the current reporting period, the first drafts of approximately 200 behavioral objectives were prepared for the 237 performance elements which were identified in previous analysis efforts by the project staff. The rating of performance elements by the twenty-one member project task force on April 9-10, 1968, were analyzed for the identification of elements common to all vocational services and those unique to each service for both beginning and experienced high school and post-high school vocational teachers. A second meeting of the task force was held on July 10-11, 1968. (Appendix A includes a listing of the task force members). The group reviewed and corrected their previous ratings and recommended clusters of performance elements for pre-service and in-service teacher education for vocational teachers. Combinations of elements were identified for courses common to all vocational teachers as well as those elements for specialized courses for particular vocational services. Critical incident data collection instruments were mailed to 1200 schools and approximately 850 critical incident reports were received.

During the quarter ending October 31, 1968, the behavioral objectives will be revised, the critical incident data will be analyzed and the results applied for improvement and further validation of performance elements incorporated in the vocational and technical teacher education curricular model being developed. Further efforts will be applied to the refinement of clusters of experiences in the teacher education program common to all vocational teachers and those unique to particular services. Work will also be started on the writing of reports based upon the findings of this study which have practical significance and utility for vocational teacher educators.

The Transition from School to Work: Worker Adjustment (Project 51)

The purposes of this project are to identify the major socio-psychological impediments to the adjustment of youth making the transition from school to work and to develop and test instructional materials which have the potential for facilitating the adjustment of young workers. Impediments to young worker adjustment will be identified through: (1) a review of relevant literature; (2) an interview survey with a sample of vocational educators; (3) a questionnaire completed by counselors at the 167 U. S. Youth Opportunity Centers; and (4) interviews with samples of youthful workers employed at various types of industrial-business organizations in three areas of the country. Of the impediments thus identified, one or a few related problems will be chosen as most important. The problem area will then become the focus of a "packaged" program, aimed at its solution, which will be developed, tested at pilot schools, and then offered for general use with vocational-technical students.

During the initial year of this proposed five-year project, an exhaustive review of literature published since 1960 on problems of worker adjustment was completed. One hundred and sixty-five abstracts judged to have particular relevance to the problems facing young workers in transition from school to work were incorporated in an annotated bibliography (Garbin, A. P. et. al. Worker Adjustment: Youth in Transition from School to Work. An Annotated Bibliography of Recent Literature). Structured interviews with "open-end" questions elicited responses from 69 vocational educators concerning the major obstacles to the adjustment of young workers and suggestions for curriculum remedies. The vocational educators were from 22 different cities and represented practically every level of the educational structure. Results from this study were presented in a report (Garbin, A. P. et. al. Problems in the Transition from High School to Work as Perceived by Vocational Educators). Questionnaires requesting the same basic information solicited in the vocational educators' survey were forwarded to each counselor employed at the 167 Youth Opportunity Centers. Data provided by 763 Youth Opportunity Centers' counselors have been analyzed and the original draft of the report written. Approximately 650 interviews were held with young workers (18 - 25 years old) employed in three areas of the country: Columbus - 250; Omaha - 240; and New Orleans - 160. The responses contained in two-thirds of these schedules have been transformed to tabulation sheets. A draft of the initial two chapters of the eventual publication has been prepared.

During the next quarter the final draft of the counselors' survey will be completed, published, and disseminated. The major goals to be accomplished in connection with the survey of young workers include: (1) complete coding; (2) analysis of data; and (3) complete writing of report.

Career Development Aspirations of Post-High School Vocational and Technical Students (Project 57)

This project intends to identify major factors influencing career development patterns of vocational-technical post-high school students, to determine the occupational and educational aspirations of those students, and to draw implications from these findings for vocational guidance for the design of curricula and programs, and for worker adjustment. Approximately 5,500 students in a stratified national sample of 50 junior colleges offering vocational-technical programs have completed a highly structured questionnaire. All these questionnaires were coded and the IBM cards punched.

The first activity to be accomplished during the next quarter will be to have the data analyzed. Subsequently, the writing of the report will be initiated.

The Identification of the Personal and Social Characteristics of Opinion Leaders Among Teachers of Vocational Agriculture (Project 63)

The major purpose of the study is to identify the personal and social characteristics of opinion leaders among teachers of vocational agriculture.

The proposed study should provide the guidelines necessary for the identification of opinion leaders among teachers of vocational agriculture. The identification of opinion leaders should aid in narrowing the theory-practice gap which exists in vocational education by allowing state leaders to design dissemination techniques which would fully utilize the personal influence which opinion leaders possess.

The data were tabulated and a first draft of the final report was completed during this quarter. The publication should be ready for outside reviewers during the next quarter.

National Seminar on Vocational-Technical Teacher Education (Project L-2)

The major purpose of the seminar is to provide a vehicle for critically examining the most pressing socio-economic problems related to the preparation of vocational-technical teachers, and to provide the essential national dialogue for positive program change to meet these critical program needs.

The Seminar will revolve around three topics:

A. Differentiated Staffing -- the development, training and utilization of various levels of professional and semi-professional staff in the total context of occupational education.

B. Vocational-Technical Education for the Disadvantaged -- the development and utilization of appropriate materials and teacher education for better occupational education for disadvantaged groups.

C. The Professional Teaching Content -- the development of more appropriate and efficient methods for providing the professional pedagogy needed by vocational-technical teachers. This topic will be handled by two major presentations on the first day of the seminar and a wrap-up presentation on the last day.

Items "A" and "B" will be handled as separate seminars within the context of the professional teaching component of vocational and technical education. They will receive major attention through the commissioning of two task forces who will work on the problem in advance of the seminar.

Each task force will be composed of six nationally recognized scholars, leaders or "prime-movers" who are most knowledgeable and involved in their respective problem area. Members of the task forces will assist in the development of a provocative and visionary position paper which critically analyzes the problem and suggests stimulating solutions to various problem facets. Two major papers will be developed by the task forces. One paper will consider the role of vocational-technical teacher educators in preparing teachers within the framework of differentiated staffing and the second will consider the problems of preparing teachers to work with the disadvantaged. The papers will be mailed to the seminar participants well in advance of the seminar so that they might be studied for reaction. These papers will then provide the springboard for dialogue at the seminar.

Seminar plans included two meetings held at The Center with task force members.

The task force concerning differentiated staffing met on May 16-17, 1968, and members of the task force for teaching the Disadvantaged met June 5-6, 1968. A listing of these members is included in Appendix A.

The writers of the task force papers were given direction and assistance in the early stages to assure a paper which would be representative of the best thinking of the task force.

ERIC Clearinghouse on Vocational and Technical Education

Pursuant to earlier agreements between Central ERIC and The Center's project officer, the regular quarterly report submitted to Central ERIC covering the period April 1 through June 30, 1968, is included as the quarterly report of progress for that aspect of The Center.

A. Management Data

1. Significant happenings

The staff of VT-ERIC is working with an Ad Hoc Committee of State Research Coordinating Unit Directors in developing guidelines for state level information services in vocational and technical education. The Committee met at The Center for Vocational and Technical Education on May 7 and 8. A second meeting of the Committee will be held in Columbus on July 25-26. The states represented are California, Kansas, Wisconsin, New Jersey, and North Carolina.

2. Change in organizational structure

The duties of the position of Retrieval Specialist have been changed and the position now has the title of Information Specialist. Duties will include assisting the Coordinator with plans for evolving secondary dissemination activities related to the state Research Coordinating Units. The person in this position will assume major responsibility for liaison with RCU's and for the production of certain information products. Dr. Robert White has resigned from this position. Mr. Joel Magisos, Document Analyst, has accepted the Information Specialist position on a half-time basis and will become full time in the Fall upon completion of his Ph.D. degree.

3. Biographies of professional personnel newly employed

Document Analyst

Agricultural Education - DAVID McCRACKEN June 17, 1968

B.S.	Iowa State University	Agricultural Education	1961
M.S.	Iowa State University	Agricultural Education	1962

Pursuing doctoral program at The Ohio State University

Experience: Training Equipment Programming Officer
G3, U.S. Army Air Defense Center
Ft. Bliss, Texas 1962-1964

Vocational Agriculture Instructor
Charles City Community Schools
Charles City, Iowa 1964-1968

B. Document Inventory

1. Total documents on hand at end of last report period		3,854
2. Documents received during period --	Solicited	345
	Unsolicited	378
	TOTAL	4,577
3. Documents rejected, transferred, etc.		48

4. Documents completely abstracted and indexed

	On Hand Clearinghouse	RIE	Sent to NARC
a. Reports	79	236	353
b. Books	5	10	14
c. Journal articles	0	2	2

	On Hand Clearinghouse	RIE	Sent to NARC	
d. Conference papers, manuals, handbooks, guides, etc.	34	3	5	
e. Speeches	4	39	41	
f. Other	188	116	133	
TOTAL	310	406	548	1,264
Total of items 3 and 4				-1,312

5. Documents in process or awaiting processing (RIE 957 + CH 2,308) 3,265

The Clearinghouse is acquiring approximately 350 titles per month. Of this total approximately 1/3, or 118 titles, per month meet the criteria established for RIE input. The backlog of items for RIE comes from the previous year's acquisition. The input of clearinghouses was not initiated until 7/1/67 issue of RIE with a gradual increase in volume of input. Prior to this time, VT-ERIC had been acquiring documents for a number of months. To work off the backlog of RIE items, the Clearinghouse is sending 150 items per month to RIE. This will be increased until there is an appropriate balance. This balance will always require some backlog to avoid peaks and valleys of input and maintain an even flow for staff and an even flow of documents to RIE.

6. Total documents on hand at end of report period 3,265

C. Services

1. Total requests made of the Clearinghouse during report period

a. Phone	9
b. Letter	193
c. Visit[1]	7
d. Other	0
	209

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[1] A list of visitors is included with this report as Appendix B

2. Types of requests

a.	Reference-nonsubject	76
b.	Reference-subject	39
c.	Spot bibliographies or literature searches	
d.	General questions on ERIC	83
e.	Other	11
		209

3. General breakdown of users

a.	Education	164
b.	Business	20
c.	Other	25
		209

D. Promotional Products

1. Brochure (See Appendix C)
    - a. AIM & ARM, Information Material for You.
    - b. June 15, 1967
    - c. 15,800
      8,800 (200 bulk to each of 44 state RCU's) Nonfederal funds
2. Newsletter/Bulletin - No new items
3. Audio-Visual Promotional Products (See Appendix D)
    - a. Description

A training package consisting of a prepared talk and eleven overlays in color was produced and forwarded to the directors of summer training programs in vocational and technical education sponsored under Section 4(c) of the Vocational Education Act of 1963 (P.L. 88-210). Included in the package were demonstration copies of RIE, AIM and ARM.

b. Title: Resources for Vocational-Technical Education

c. The primary use of the materials is to instruct attendees in use of the ERIC system.

d. Number Distributed

Twenty seminars and institutes involving approximately 1,040 participants.

E-1 Information Analysis Data (New Items Completed) Bibliographies

A. Worker Adjustment: Youth in Transition from School to Work; An Annotated Bibliography of Recent Literature

1. Physical Characteristics
Period Covered: 1960 to present. Highly selective. Contains 165 annotated titles.
Publication date: 1968
Indexes: User
Topic
Author

2. Purpose
Initial phase of project: Youth in Transition from School to Work.

3. Intended Audience and Impact
Researchers, work administrators, teachers, guidance personnel, others.

4. Personnel Engaged
Project staff: Dr. Albeno Garbin and Dr. Robert Campbell, Project Directors: Dorothy Jackson, Research Associate, and others.

B. The bibliography, The Choice of Vocational Education as an Educational Opportunity, reported on page 8 of the October-December Quarterly Progress Report was issued by The American Personnel and Guidance Interdivisional Commission on Guidance and Vocational Education (National Vocational Guidance Association and American School Counselors Association). It was not a joint publication effort as previously reported. It is 13 pages and will be entered into the ERIC system.

E-2 Information Analyses Data (Items in Progress)

No new items initiated

E-3 Continuing Publications During This Period

Abstracts of Instructional Materials in Vocational and Technical Education. Spring 1968. 183 p.

Abstracts of Research and Related Materials in Vocational and Technical Education. Summer 1968. 268 p.

F. Involvement with Professional Organizations

1. Participation on panels or presentation at special programs and Professional meetings.

Date	Name of Meeting	Place	Person
May 1, 1968	American Industrial Arts Association	Minneapolis, Minnesota	Dr. Robert E. Taylor Director
May 15, 1968	National Conference of Trade and Industrial Education	Kansas City, Missouri	Mr. Joel H. Magisos Information Specialist
May 24, 1968	Delta Pi Epsilon	Ohio State University Columbus, Ohio	Mr. Paul Steagall Center Research Associate
June 22, 1968	Conference on Library Services to Vocational-Technical Education Programs in Junior Colleges (ALA-AAJC)	St. Louis, Missouri	Mr. Charles Harris Acquisition Specialist
June 28, 1968	Home Economics Research Conference	Minneapolis, Minnesota	Mrs. Celianna Wilson Coordinator

2. Joint publication arrangements between clearinghouses and professional organizations.

No new arrangements.

3. Other affiliations or arrangements with specialized professional organizations.

The VT-ERIC staff arranged with the Human Engineering Institute of Cleveland, Ohio for input of programmed instructional materials which have an optional scheduling capability with an automated teaching machine. The substantive areas covered are (1) Automotive diesel maintenance, (2) Electrical maintenance practices, (3) Instrument maintenance, and (4) Mechanical maintenance practices.

G. Advisory Committee Meeting

The National Advisory Committee of The Center for Vocational and Technical Education, and the ERIC Clearinghouse on Vocational and Technical Education met on June 20-21, 1968. Members of the Advisory Committee and members of the staff of The Center ranked lists of user groups, services, and products which had been consolidated from lists developed by an Ad Hoc Committee of State Research Coordinating Unit Directors. The opinions collected from the two groups are undergoing analysis to determine composite rankings and concordance between the groups. The data will be used by the Ad Hoc Committee to help in the development of guidelines for the determination of priorities for state information systems for vocational and technical education.

The Advisory Committee was also asked to suggest problem areas which would be worthy of information analysis papers. From this discussion the following emerged as possible topics:

Occupational Analysis (A new system of analysis of occupations so that they relate to the educational system)
Readiness for Occupational Choice
Attitudinal Training
The Role of Information in Educational Change

Publications

Appendix E is a list of the publications issued during this quarter.

Research Library

The Center had made application through The Ohio State University Library System for assistance in acquisition of materials under Title II B of the Higher Education Act. We have been notified that $1500.00 will be available for this purpose.

Leadership Development

A. Proposals Initiated

Special Project for Research Training in Vocational Education: Professional Pre-session

This special training project will provide instruction to 180 individuals, divided into six different, three-day programs of 30 persons each. The programs are to be scheduled concurrently as pre-sessions to the 1968 American Vocational Association Convention. The principal purpose of these programs will be to upgrade the research and research management competencies of participants who are employed in or are preparing for positions in occupational education. The six programs will consist of: a) Planning Research Studies; b) Applications of Regression Models to Problems in Occupational Education; c) Applications of Analysis of Variance Techniques to Problems in Occupational Education; d) Developing Data Collection Instruments; e) Introduction to Computer Use in Research; and f) Fundamentals of Research Management. The participants will be selected from those with primary interest in the direction and conduct of research in Vocational and Practical Arts Education. The instructional staff will consist of specialists in each program area, supplemented by vocational educators with demonstrated research competence. Formal presentations accompanied by specially prepared instructional materials will comprise the major mode of instruction.

Interdisciplinary Workshop for Special Education and Vocational Education Teachers

The purpose of this project is to test the efficiency of training Special Education and Vocational Education teachers together in an effort to develop coordinated programs for the educable mentally retarded. Further, this project is designed to provide guidelines for similar cooperative training activities designed to generate coordinated program planning efforts.

Participants will be selected and organized in teams of two, with one Special Education teacher and one Vocational Education teacher being elected from each of the contributing schools. These teams will receive instruction from recognized experts in the field. The teams will work individually and collectively in the planning of tentative programs for the mentally retarded.

This workshop will provide a means for professionally trained personnel in Special Education and Vocational Education to work as a team in the same school in planning effective and realistic programs that may be implemented upon the teams return to a common local school. It will further provide materials and guidelines for further testing and use in other appropriate educational settings.

Special Project for Research Training in Vocational Education: Research Training Series

This special training project will provide instruction to 200 individuals in four training programs of five days each with fifty participants in each program. The principal purpose of these programs will be to upgrade the research and research utilization competencies of participants who are employed or preparing for employment in vocational education positions. The four programs will consist of: 1) Evaluation in Vocational Education; 2) Planning Local Programs Based Upon Manpower Research; 3) Student Characteristics: Determinants for Program Planning and Development; and 4) Patterns of Career Development as Applied to Vocational Education.

The research training program will bring together vocational education practitioners and researchers as participants for joint training programs to promote maximum interaction in the conduct and application of research to vocational education needs. Researchers will be selected from those with primary interest in the direction and conduct of research in vocational education and practitioners selected from those who have the opportunity to utilize research and research findings in the solution of operational problems in vocational education.

The training programs will be conducted at four separate institutions at different times and directed by research specialists recognized for their expertise in their program areas. Instructors will include vocational educators with demonstrated research competence in the program areas identified above. Formal presentations, group interaction, and experiences in using research methodology tools and results will comprise the major modes of instruction.

B. Proposals Approved

Contracts have also been received and work has begun on the following projects: The Planning, Programming, Budgeting Systems and The National Program Developments Institutes in Technical Education, and Development of Performance Goals for a New Office and Business Education Learning System (NOBELS).

Additional Contracts and Grants

In addition to the various projects and activities conducted by The Center through its own continuing budget, a number of other contracts for specific projects and activities are in force. They are reported herein to show the total involvement and impact of The Center.

A Planning Study to Determine the Feasibility of a Research Project Concerning Employment Opportunities and Training Needs in Farming and Off-farm Agricultural Business and Industry

The major purpose of the study is to plan and coordinate a nationwide study concerning employment opportunities and training needs in farming and off-farm agricultural business and industry. The planning study has enlisted the combined efforts of the U. S. Departments of Agriculture, Commerce, Health, Education and Welfare, and Labor with leaders in the field of agricultural education in developing a long-range project for education in agriculture.

The developmental project will provide the necessary background, coordination, and design for a massive attack on a growing problem in the identification of employment opportunities and training needs in farming and off-farm agricultural businesses and industries. The project will also build a framework for coordinating the educational efforts of several U. S. Departments, teacher educators, and supervisors with agricultural business and industrial firms.

The project was concluded June 30, 1968 and a major proposal carried to Washington on June 28. The proposal was titled "Project Agriculture" and requests $202,129 for operation in the initial period. Project Agriculture was logged in at the USOE as Project number 9-0005. (See Appendix F)

A Planning Study to Determine the Feasibility of Developing a New Business and Office Education Curriculum

The purpose of this study was to explore the feasibility of developing a major project in the office occupations area which uses the "systems approach" in developing a vocational office curriculum that is congruent with the concepts developed in the organic curriculum theory.

At the outset of the feasibility study criteria were established for determining whether a major study should be conducted in the office occupations area. The criteria stated that a major study should: (1) be supported by professional leadership; (2) evolve from available interdisciplinary thinking; (3) have a workable operational structure with profession-wide support, and (4) provide for dissemination as an integral part of the overall plan.

After investigation and evaluation based on the above criteria, the investigators concluded that: (1) business and office education lacked well-defined objectives and specificity of goals; (2) leaders within the office education profession were willing to conduct the needed research; and (3) an operational structure existed which would give direction to the study. A plan was submitted to the USOE for a study which would define a comprehensive, coherent, timely set of performance goals for business and office education.

USOE funding for the planning and feasibility study ended on February 29, 1968. The Center then provided funds for Center staff members to develop a classification plan in taxonomic form which would provide: (1) systematic guidance for the observation and analysis of office activities, (2) a common language for describing office activities, (3) a basis for consolidating data from many locations and occupations, and (4) a basis for writing performance goals.

During the past quarter the final manuscript for the publication, A Taxonomy of Office Activities for Business and Office Education was completed and sent to the printer. The Center staff met with the principal investigator to discuss how the taxonomy can be used as a basis for the development of data collection instruments.

This project was concluded upon the principal investigator's submission of the final report to the USOE Bureau of Research on June 10, 1968.

Staff Development

Members of The Center professional staff have been asked to project a personal professional development program for the next three to five years. This would include identification of professional goals, specific competencies that they wish to acquire or enhance and suggested ways and means of developing these competencies. The individual plans will be reviewed with The Center Director. The possibilities of conducting training programs for groups of Center staff personnel will be considered where there is sufficient need and interest. Individual participation at professional development institutes and workshops will also be encouraged.

Meeting with Associate Commissioner, Bureau of Research

On June 27 the Director of The Center met with the Associate Commissioner, Bureau of Research; the Director of the Division of Comprehensive and Vocational Education Research; and The Center's Project Officer, to present a detailed report of accomplishments on The Center and to describe projected projects and developments.

Advisory Committee Meeting

On June 20 and 21, members of The Center's National Advisory Committee met in Columbus. Major discussion centered around the program statements developed for the six major areas of emphasis within The Center. A number of helpful suggestions were secured and insights gained which aided in establishing priorities and in identifying long-range options within these programmatic areas. Consideration was also given to The Center's leadership development program and future needs in this area, problems related to the dissemination of research and materials, the operation of the Clearinghouse, and needed research review papers.

Center Contributions to Research and Development Activities of Other Agencies, Groups, and Organizations

Members of The Center staff met with the Planning Committee of the National Association of State Directors of Vocational Education to develop plans for a summer leadership training seminar to be conducted by The Center in Columbus on August 6-9.

Facilities

Good progress has been made on the addition to The Center's building. It appears, however, that due to unforeseen weather and materials shortage the contractor will not be able to meet the August 1 occupancy deadline. October 1 occupancy is now projected.

APPENDIX

APPENDIX A

Advisory Committees and Panels

Common and Unique Elements of Vocational and Technical Teacher Education (Task Force Members - April 9-10 and July 10-11, 1968)

Agriculture Education

Dr. William Drake, Associate Professor, Department of Education, College of Agriculture, Cornell University, Ithaca, New York

Mr. Paul J. Foster, Director, Agriculture Education, State Board for Vocational Education, Denver, Colorado

Mr. Millard Gundlach, Vice-President-Region 3, NVATA, Iowa-Grant High School, Montfort, Wisconsin

Business and Office Occupations Education

Mr. Russell J. Mercer, State Supervisor, Business and Office Occupations, State Office Building, Atlanta, Georgia

Mr. Richard Shaffer, Chairman, Business Education Department, Pacific High School, San Leandro, California

Dr. Leonard J. West, Associate Professor of Education Research, Division of Teacher Education, City University of New York, New York, New York

Distributive Education

Dr. Kenneth Ertel, Professor, Department of Distributive Education, College of Education, University of Idaho, Moscow, Idaho

Mr. K. Otto Logan, State Supervisor, Distributive Education, State Department of Education, Olympia, Washington

Mr. Robert Wray, Distributive Education Coordinator, Southside High School, Fort Wayne, Indiana

Health Occupations Education

Mrs. Nadia Andrushko, Coordinator, Health Occupations Program, Westinghouse Area Vocational High School, Chicago, Illinois

Miss Clara Brentlinger, State Supervisor, Health Occupations Division, State Department of Vocational and Technical Education, Oklahoma City, Oklahoma

Dr. Lewis Holloway, Teacher Educator, Health Occupations Education Center, University of Iowa, Iowa City, Iowa

Home Economics Education

Miss Nancy Bagott, Associate Professor, Home Economics Education, University of Arizona, Tucson, Arizona

Mrs. Marcia True, Teacher, Home Economics, Westbrook High School, Westbrook, Maine

Miss Janet Wilson, Director, Home Economics Education, Division of Vocational Education, State Capitol Building, Lincoln, Nebraska

Technical Education

Mr. William Cawlfield, State Supervisor of Technical Education, State Department of Education, Jefferson City, Missouri

Dr. Edwin L. Kurth, Professor of Technical Education, University of Florida, Gainesville, Florida

Mr. Bill Lamen, Supervisor of Technical Education, Oklahoma City Public Schools, Oklahoma City, Oklahoma

Trade and Industrial Education

Mr. Walter A. Bialobrzeski, Consultant, Bureau of Vocational-Technical Schools, Connecticut State Department of Education, Hartford, Connecticut

Mr. James Blyth, Instructor, Zanesville High School, Zanesville, Ohio

Dr. Max Eddy, Professor and Chairman, Department of Industrial Education, School of Technology, Purdue University, Lafayette, Indiana

National Seminar of Vocational-Technical Teacher Education

Members of the Task Force Concerning Differentiated Staffing - May 16-17, 1968

Dr. Dwight Allen, Dean of Education, University of Massachusetts, (Writer of the paper) Amherst, Massachusetts

Professor L. O. Andrews, Teacher Educator, Teacher Education Department, The Ohio State University, Columbus, Ohio

Dr. Marjorie East, Head, Department of Home Economics Education, Pennsylvania State University, University Park, Pennsylvania

Dr. Lawrence Erickson, Teacher Educator, Department of Business Education, University of California, Los Angeles, California

Dr. Elizabeth Kerr, State Consultant, Health Occupations Education Section, Iowa Department of Public Instruction, Iowa City, Iowa

Dr. Carl Schaefer, Chairman, Department of Vocational-Teacher Education, Rutgers University, New Brunswick, New Jersey

Members of the Task Force for Teaching the Disadvantaged - June 5-6, 1968

Dr. Herbert Brum, Assistant Supervisor for Vocational Education, State Department of Education, Columbus, Ohio

Dr. Flossie Byrd, Dean, School of Home Economics, Prairie View A & M College, Prairie View, Texas

Dr. Edmund Gordon, Director of the ERIC Clearinghouse for the Disadvantaged, Yeshiva University, (Writer of the paper) New York, New York

Dr. Marvin Hirshfeld, Chairman, Department of Distributive Education, Temple University, Philadelphia, Pennsylvania

Dr. Lloyd J. Phipps, Professor and Chairman, Division of Agricultural Education, University of Illinois, (Represented by Dr. Gerald Fuller, Assistant Professor, Division of Agricultural Education, University of Illinois) Urbana, Illinois

Mrs. Mamie Sizemore, Indian Education Consultant, Arizona State Department of Education, Phoenix, Arizona

National Advisory Committee - June 20-21, 1968

Mr. R. D. Anderson, State Director of Vocational Education, State Department of Education, Columbia, South Carolina

Dr. Wilbur B. Brookover, Professor, Sociology and Education, Michigan State University, East Lansing, Michigan

Mrs. Lucy C. Crawford, Associate Professor, Distributive Education, Virginia Polytechnic Institute, Blacksburg, Virginia

Mr. Donald Gilles, State Supervisor of Trade and Industrial Education, State Department of Education, Public Service Building, Salem, Oregon

Dr. Alberta Hill, Chairman, Department of Home Economics Education, Iowa State University, Ames, Iowa

Dr. Jacob Kaufman, Director, Institute for Research in Human Resources, Pennsylvania State University, University Park, Pennsylvania

Mr. D. N. McDowell, Secretary of Agriculture, Hull Farms State Office Building, Madison, Wisconsin

Mr. Sherrill McMillen, Chief, Program Planning and Development Branch, Division of Technical Education, Office of Education, Department of Health, Education, and Welfare, Washington, D. C.

Miss Grace Nangle, State Supervisor, Health Occupations, State Department of Education, 182 Tremont Street, Boston, Massachusetts

Dr. J. Win Payne, Superintendent, Napa Valley Unified School District, Napa, California

Dr. Maurice W. Roney, Director, School of Industrial Education, Oklahoma State University, Stillwater, Oklahoma

Dr. John Rowlett, Professor, Industrial Arts, Eastern Kentucky State College, Richmond, Kentucky

Dr. James A. Sensenbaugh, State Superintendent of Education, State Department of Education, 301 West Preston Street, Baltimore, Maryland

Mr. Bernard A. Shilt, Director of Business Education, Buffalo Public Schools, 725 City Hall, Buffalo, New York

Dr. Orville E. Thompson, Chairman, Department of Applied Behavioral Sciences, University of California, Davis, California

Mr. Joseph Tuma, Director, Manpower Utilization Studies Division, Institute of Labor and Industrial Relations, 5229 Cass Avenue, Detroit, Michigan

ERIC Clearinghouse Advisory Committee - June 20-21, 1968

(All members of The Center's National Advisory Committee listed above)

Dr. Gordon Law, Director of Research, American Vocational Association, Inc., Washington, D. C.

Dr. George Luster, Director, Instructional Materials Laboratory for Vocational Education, University of Kentucky, Lexington, Kentucky

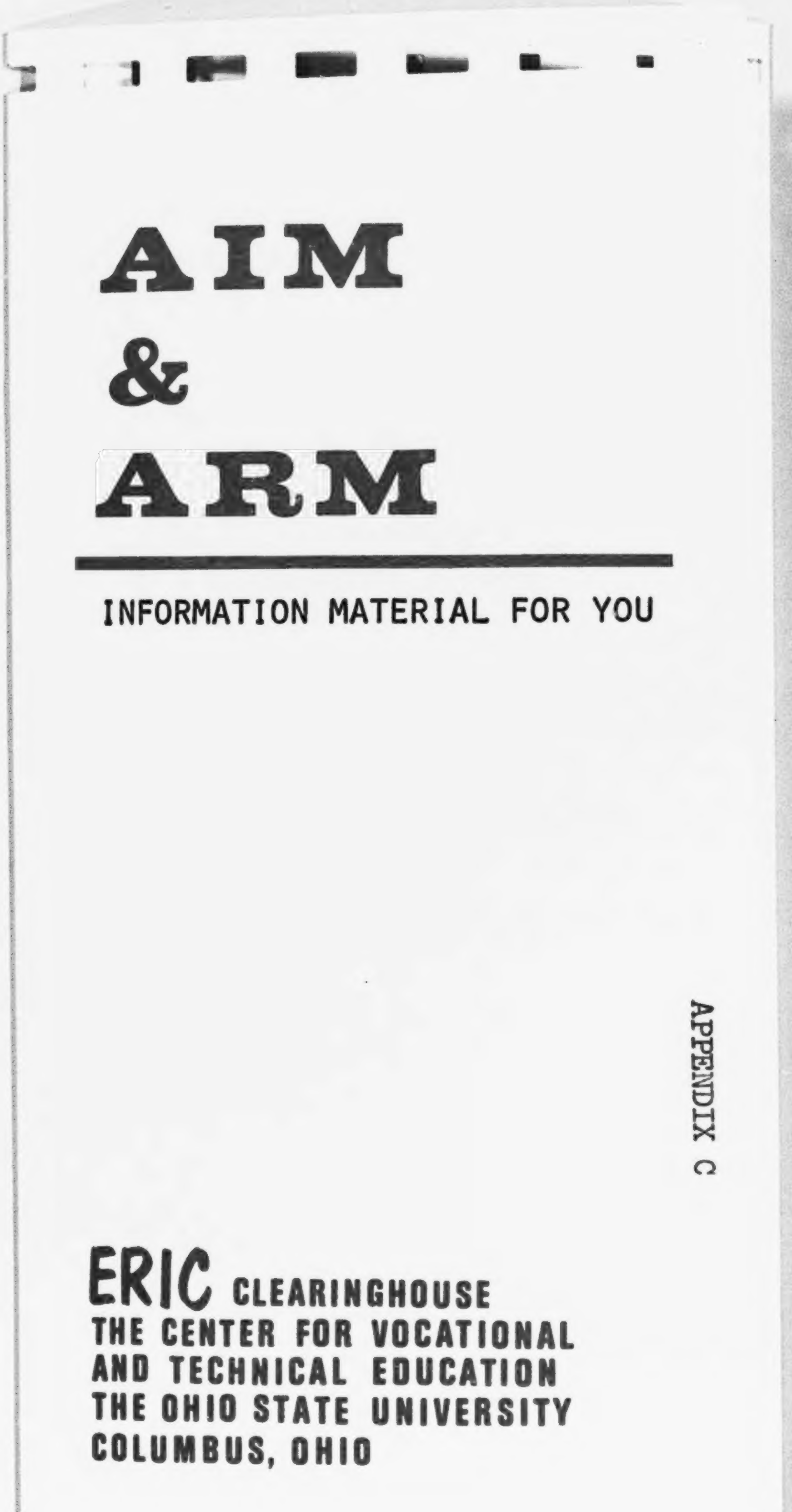
APPENDIX B

Visitors to the ERIC Clearinghouse on Vocational and Technical Education

April 1, 1968 - June 30, 1968

April 10-11, 1968	Dr. William Berndt, Assistant Director, Curriculum and Instructional Materials Section, Division of Vocational and Technical Education, U.S. Office of Education, Washington, D.C.
	Mr. James Hill, Acting Chief, Curriculum and Instructional Materials Section, Division of Manpower, Development and Training, U.S. Office of Education, Washington, D.C.
April 16, 1968	Dr. William Sargeant, Chairman, Research Committee, American Industrial Arts Association.
April 18, 1968	Dr. Gordon Law, Research Director, American Vocational Association and Editor, Research Visibility, Washington, D.C.
April 23, 1968	Mr. Frank Smardak, Project Officer, and Mr. Harvey Marron, Chief of ERIC, U.S. Office of Education, Washington, D.C.
April 24, 1968	Dr. Carl F. Scott, Director, Curriculum and Instruction, Indiana Vocational Technical College, Indianapolis, Indiana
May 16, 1968	Leonard J. Young, International Labour Office, Geneva, Switzerland
May 31, 1968	Molly Moffit, American Association of Junior Colleges Staff, Washington, D.C.

APPENDIX C



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INFORMATION MATERIAL FOR YOU

ERIC CLEARINGHOUSE
THE CENTER FOR VOCATIONAL
AND TECHNICAL EDUCATION
THE OHIO STATE UNIVERSITY
COLUMBUS, OHIO

NEW INFORMATION TOOLS

You and your associates in vocational-technical education, industrial arts and other related areas have been asking for more effective means of maintaining surveillance of instructional materials, research and other relevant professional literature. The ERIC Clearinghouse on Vocational and Technical Education working with advisory groups has developed and made available two quarterly abstract series to aid you in keeping abreast of new developments and materials in your own and related fields. You will want both abstract series to keep alert to the range of materials available which will assist in your activities.

These two quarterly publications, *Abstracts of Instructional Materials in Vocational and Technical Education* (AIM) and *Abstracts of Research and Related Materials in Vocational and Technical Education* (ARM), will provide you with:

- wide coverage of relevant professional literature
- abstracts of significant documents
- indexes by subject; by vocational services, industrial arts education, manpower economics, occupational psychology and sociology; by authors and institutions
- a means of locating and securing the full text of documents

AIM

AIM includes abstracts of materials typically designed for teacher use or student use in the classroom, and annotations of bibliographies or lists of instructional materials. These materials have been generated by universities and state departments of education, curriculum projects, etc. AIM will be particularly useful to teachers, teacher educators, curriculum specialists, local directors of vocational education, state supervisors, administrators and others who use instructional materials in the teaching-learning setting or in curriculum development. Those interested in establishing new programs or updating existing programs will find AIM and its indexes an invaluable aid in determining the instructional resources that are presently available.

TYPICAL INDEX TERMS

- AGRICULTURAL TECHNICIANS
- APPRENTICESHIPS
- COOPERATIVE EDUCATION
- CURRICULUM GUIDES
- DISADVANTAGED YOUTH
- DRAFTING
- FOOD SERVICE WORKERS
- HEALTH OCCUPATIONS EDUCATION
- HUMAN RELATIONS
- MERCHANDISE DISPLAY
- NURSES AIDES
- STENOGRAPHY
- TEACHING GUIDES
- VOCATIONAL ADJUSTMENT

ARM

ARM incorporates abstracts of research and other related materials which are useful to a wide audience of users such as researchers, supervisors, teacher educators, education specialists, curriculum developers, administrators, teachers and others who have an interest in vocational and technical education and fields such as industrial arts. Reports that are abstracted include research supported by the U.S. Office of Education, Department of Labor, Office of Economic Opportunity, and educational foundations. Materials generated by state departments, teacher education departments and similar groups are also included.

TYPICAL INDEX TERMS

- ADMISSION CRITERIA
- AREA VOCATIONAL SCHOOLS
- ATTITUDE TESTS
- BEHAVIORAL OBJECTIVES
- COMPUTER ASSISTED INSTITUTION
- DISADVANTAGED YOUTH
- EMPLOYER ATTITUDES
- EMPLOYMENT OPPORTUNITIES
- FEDERAL PROGRAMS
- JOB SATISFACTION
- MARINE TECHNICIANS
- ON THE JOB TRAINING
- PROGRAM DESCRIPTIONS
- RESEARCH COORDINATING UNITS

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- RESEARCH COORDINATING UNITS

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AIM and ARM are published quarterly (Fall, Winter, Spring, Summer). The first issue began Fall 1967. Each publication is available by subscription for $9.00 per year. Single copies are $2.75 each. Hardcopy issues which go out of print will be available on microfiche. The order form included in this announcement may be detached and used to initiate subscriptions or purchase single issues of hardcopy. Many schools are ordering both series for professional libraries and desk copies for teachers and administrative personnel.

Those interested in reviewing copies of AIM and ARM will find them on file in the following offices of vocational-technical education and industrial arts education: State Directors, Head State Supervisors, State Research Coordinating Units, and Head Teacher Educators.

MATERIALS IN AIM AND ARM

A basic concept of the ERIC system is to make known the availability of the full text of materials abstracted. Most of the materials processed into the ERIC system with an ERIC Document (ED) number will be available from the ERIC Document Reproduction Service (EDRS) in the form of microfiche or facsimile copy. There is an EDRS availability line with each abstract which indicates if a document may be obtained from EDRS. If a document is not available from EDRS it is available from a source cited at the end of the abstract. Microfiche or facsimile copy must be ordered by ED (ERIC Document) number since EDRS is not set up to respond to requests for materials by subject. AIM and ARM indexes can be used to determine ED numbers which relate to problem areas. Detailed instructions for ordering microfiche and facsimile copy are included in each copy of AIM and ARM. For quick results, obtain order forms for microfiche or facsimile copy from

ERIC DOCUMENT REPRODUCTION SERVICE (EDRS)
THE NATIONAL CASH REGISTER COMPANY
4936 FAIRMONT AVENUE
BETHESDA, MARYLAND 20014

MICROFICHE SETS FOR MATERIALS IN AIM AND ARM

Organizations or individuals interested in subscribing to only the microfiche sets for AIM and/or ARM may do so by sending a $50 deposit to EDRS and requesting the usual EDRS deposit procedure for the AIM and/or ARM microfiche sets. Estimated yearly cost is $300 for all 8 sets. This provides coverage of both series for a full year. By ordering the microfiche for AIM and ARM the subscriber would have the full text of documents cited in these two publications with some minor exceptions such as copyrighted materials.

MICROFICHE READERS

To determine a suitable reader, send for "A Survey of Microfiche Readers and Reader-Printers Currently Manufactured in the United States" by enclosing 50 cents in any convenient manner, stamps acceptable, with a request, to:

THE EXECUTIVE SECRETARY
NATIONAL MICROFILM ASSOCIATION
250 PRINCE GEORGE STREET
P.O. BOX 386
ANNAPOLIS, MARYLAND 21404

APPENDIX D

RESOURCES FOR VOCATIONAL-TECHNICAL EDUCATION

The following presentation is a description of the ERIC system in general and the ERIC Clearinghouse for Vocational and Technical Education in particular. It is designed as a script to be used with transparencies made from the included illustrations. Its purpose is to inform the profession about the utility of the ERIC system. The system will change, as it develops, beyond these June, 1968 conditions.

RESOURCES FOR VOCATIONAL-TECHNICAL EDUCATION

The educational profession has recognized the need for a system of storing and retrieving information. ERIC was established within the U. S. Office of Education to provide such a system. ERIC is the acronym for Educational Resources Information Center. It is a national system for the acquisition, storage, retrieval, and dissemination of information for education.

Illustration 1:

The ERIC Clearinghouse for Vocational and Technical Education was approved and funded as part of the ERIC system. It is also part of The Center for Vocational and Technical Education, located at The Ohio State University, Columbus, Ohio. The functions of the clearinghouse fulfill the third objective of The Center as shown in this illustration. At the present time, eighteen clearinghouses are responsible to Central ERIC for the acquisition, storage, retrieval and dissemination of materials in given areas of education. It is likely that other ERIC Clearinghouses will be established as future needs are identified.

Illustration 2:

The relationship among the clearinghouses and the Central ERIC organization is represented in this illustration. Central ERIC is shown as the hub of a group of eighteen clearinghouses. Each Clearinghouse is identified by letters within small ovals. For example, VT are the letters used by the Vocational-Technical Education Clearinghouse. In the lower portion of the illustration, the letters JC are used to represent the

Junior College clearinghouse. Each clearinghouse is responsible for a given area. It is responsible for acquiring, processing, and forwarding materials within its scope to Central ERIC for further processing. Documents are abstracted and indexed at the clearinghouses. They are then forwarded to Central ERIC for computer-processing of the abstract, bibliographic information, and descriptors. The original document is then forwarded to the ERIC Document Reproduction Service (EDRS) for filming and processing to microfiche form.

Microfiche is a flat form of microfilm, four by six inches in size. Each microfiche contains images of up to seventy pages of the original document. The microfiche provides a convenient and economical means of storing and transmitting information. It is convenient because many documents may be stored in a small space, any page may be projected to full size on a reader, and any page can be reproduced on a reader-printer. It is economical to the user because individual copies of microfiche sell for twenty-five cents each.

If hard copy is desired, this may be obtained from EDRS for four cents a page. The document can sometimes be obtained from the original source. If so, this is shown at the end of the resume.

Illustration 3:

Identifying letters, titles, and locations of eight of the ERIC clearinghouses are presented in this illustration. For example, AC is the clearinghouse on Adult and Continuing Education, located at Syracuse University, Syracuse, New York. AL represents the clearinghouse for Linguistics and the Uncommonly Taught Languages located at Washington, D.C.

This list continues to FL, the Clearinghouse on the Teaching of Foreign Languages, located in New York City. The remaining

Illustration 4:

clearinghouses are shown here. As stated previously, JC represents the Clearinghouse for Junior Colleges. It is located at the University of California, Los Angeles. The list continues through the remainder of the eighteen clearinghouses.

A major product of the ERIC system is the monthly publication, Research in Education. It is the primary vehicle by which information is announced to persons concerned with educational resources. This computer-generated

Illustration 5:

publication of Central ERIC is printed and distributed by the Government Printing Office. It is available by subscription for $11 per year. Each issue of Research in Education contains information on completed research and on-going research. The publication is sometimes called RIE.

Information on completed research is announced in the form of resumes. Each resume contains the abstract and descriptors of a document processed through the ERIC system. In addition, there are several indexes which make it possible to locate information on specific topics or by certain authors.

The information about on-going research is also reported in RIE in the form of resumes of projects as they are funded. These are in the form of abstracts and descriptors so that one may be aware of current research. There are also several indexes to allow one to conduct searches for current research.

The VT-ERIC Clearinghouse is also using publications as the primary means of disseminating information. The two publications currently produced by The Center for Vocational and Technical Education are

Illustration 6:

AIM and ARM. The two series are produced on a quarterly basis, starting with the Fall 1967 issues. The instructional materials series, AIM primarily reports instructional materials that have been acquired and processed at the clearinghouse. Research and research-related materials are reported in ARM. Either series is available by subscription from The Center at a cost of $9 annually. Both of these series report vocational and technical education information. There is multiple indexing of the major concepts of the documents announced in each issue, an author index and a document number index.

Illustration 7:

In this illustration, Central ERIC is represented by the letters E R I C within the circle. The VT-ERIC Clearinghouse is represented by the letters V T in the upper left portion of the illustration. Processed documents are input to ERIC by the VT Clearinghouse and the other clearinghouses. The materials from all of the clearinghouses are forwarded to Central ERIC and announced in Research in Education on a monthly basis. The outline of another publication, symbolized by the dotted line, represents other publications of Central ERIC. An example would be the ERIC Collection of Documents concerning Disadvantaged Youth. Concurrently, the documents processed by the VT-ERIC Clearinghouse are included for announcement in

AIM and ARM. The other unnamed publications in this illustration would represent such items as the research review and synthesis series of the VT-ERIC Clearinghouse. There has been a review and synthesis of research in: agricultural education, business and office occupations, distributive education, home economics education, industrial arts education, technical education, and trade and industrial education.

In Research in Education, or in any of the other ERIC publications, the principle means of transmitting information about a document is by the resume. There are four major sections in the resume shown in

Illustration 8:

this illustration. The first consists of the clearinghouse identification number and the ERIC identification number. It is followed by the bibliographic information, the descriptors, and the abstract.

Looking at the first section of the resume, this document is identified as VT 000 453 and also as ED 012 313. The ED 012 313 identification is the number you would use to obtain a copy of this document from the ERIC Document Reproduction Service, frequently referred to as EDRS.

The second section of the resume includes the bibliographic information. Typical information includes the title, the personal author or authors, and the source of the document or the publisher. The publication date in this case is sixty-five representing 1965. On the last line of the second section we see seventeen pages which accounts for all printed pages including the cover. The price for copies of the materials from EDRS is given. The last line in this section is an availability statement and gives you the price for obtaining the microfiche copy or the price of hardcopy from

ERIC Document Reproduction Service. Additional information regarding orders from ERIC Document Reproduction Service may be obtained from any recent issue of Research in Education or directly from EDRS.

The third section of this illustration gives the descriptors assigned to this document for retrieval purposes. The descriptors which identify the concepts in the document are: industrial education, technical education, vocational education, curriculum planning, teacher education, and in-service teacher education. Central Michigan University, Michigan is also given because the document relates to this institution. The descriptors with the asterisk represent the major concepts of this document. These terms are used in the index of an ERIC publication reporting this document.

The final section is an abstract section. It provides an abstract of approximately 200 words to describe the content of this document. If there is a publishing source which sells this document, this information is included at the end of the abstract. Whenever a hardcopy is desired, be sure to check this source. The source cost will be less than the EDRS hardcopy. EDRS hardcopy is a back-up resource when copies of the original document are out of print or are no longer available.

Illustration 9:

This is another example of a resume. The most noticeable change is that this document has a VT number only and no ED designation. Since this document does not have the ED designation, it would not be included in Research in Education. It would be announced with the other documents in an issue of Abstracts of Research and Related Materials in Vocational and Technical Education (ARM).

One might visualize the ERIC system as a cycle.

Illustration 10:

In this illustration several users forward information to the VT Clearinghouse. Documents received and processed by the clearinghouse are announced in AIM and ARM. They would be available to the user in the appropriate microfiche collections. Many of the same materials would be forwarded to Central ERIC where they would be announced in Research in Education. If so, they would be available as individual documents on microfiche or as hard copy from EDRS. Microfiche of the items in AIM or ARM without the ED designation may also be obtained from EDRS, but not as individual documents. The materials announced in AIM and ARM will be continuously filmed and placed on microfiche under a single ED number. This permits anyone to obtain the microfiche collection for any single issue of AIM or ARM from EDRS. In some states certain agencies will obtain these collections and the equipment to reproduce microfiche or hardcopy of individual documents. Research Coordinating Units are interested in providing this service; however, this capability has not been fully developed at this time. Several indexes to the materials are also included in each microfiche collection. The arrows in the illustration between ARM and EDRS depict documents from a single issue of ARM being input under one ED number. AIM would be treated in the same manner. Items being input from Central ERIC receive an individual ED number for each document. An arrow from the circle with Research in Education and EDRS directed back to a user shows the completed cycle.

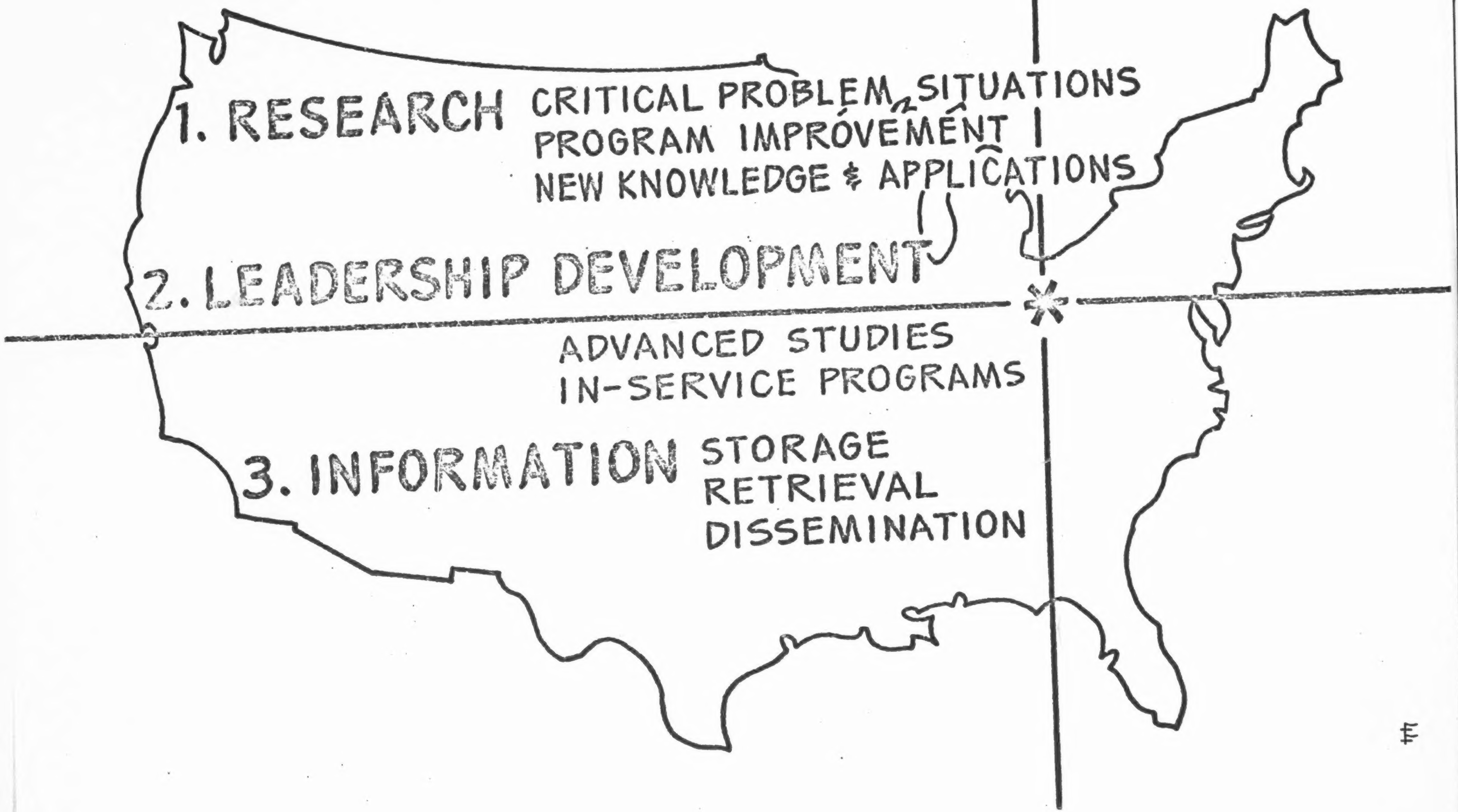
The future value and utility of the ERIC system will be dependent upon the flow of materials into the system. This input of materials must come from the individual members of the educational community.

Illustration 11:

The kinds of materials being solicited by the VT-ERIC Clearinghouse is shown here. Two copies of research or research-related materials which may have some impact on vocational and technical education are solicited. Examples of the types of materials desired are: instructional materials, research reports, conference reports, bibliographies, and so forth. Any person who has copies of these types of materials or who is involved in the production of materials pertaining to vocational and technical education should forward two copies of each document to the ERIC Clearinghouse for Vocational and Technical Education. The materials should be directed to the attention of the Acquisitions Specialist at the ERIC Clearinghouse, Columbus, Ohio. The resultant products include *Abstracts of Research and Related Materials in Vocational and Technical Education*, or *Abstracts of Instructional Materials in Vocational and Technical Education*, synthesis and review papers on selected topics, microfiche or hardcopy or individual documents, and bibliographies.

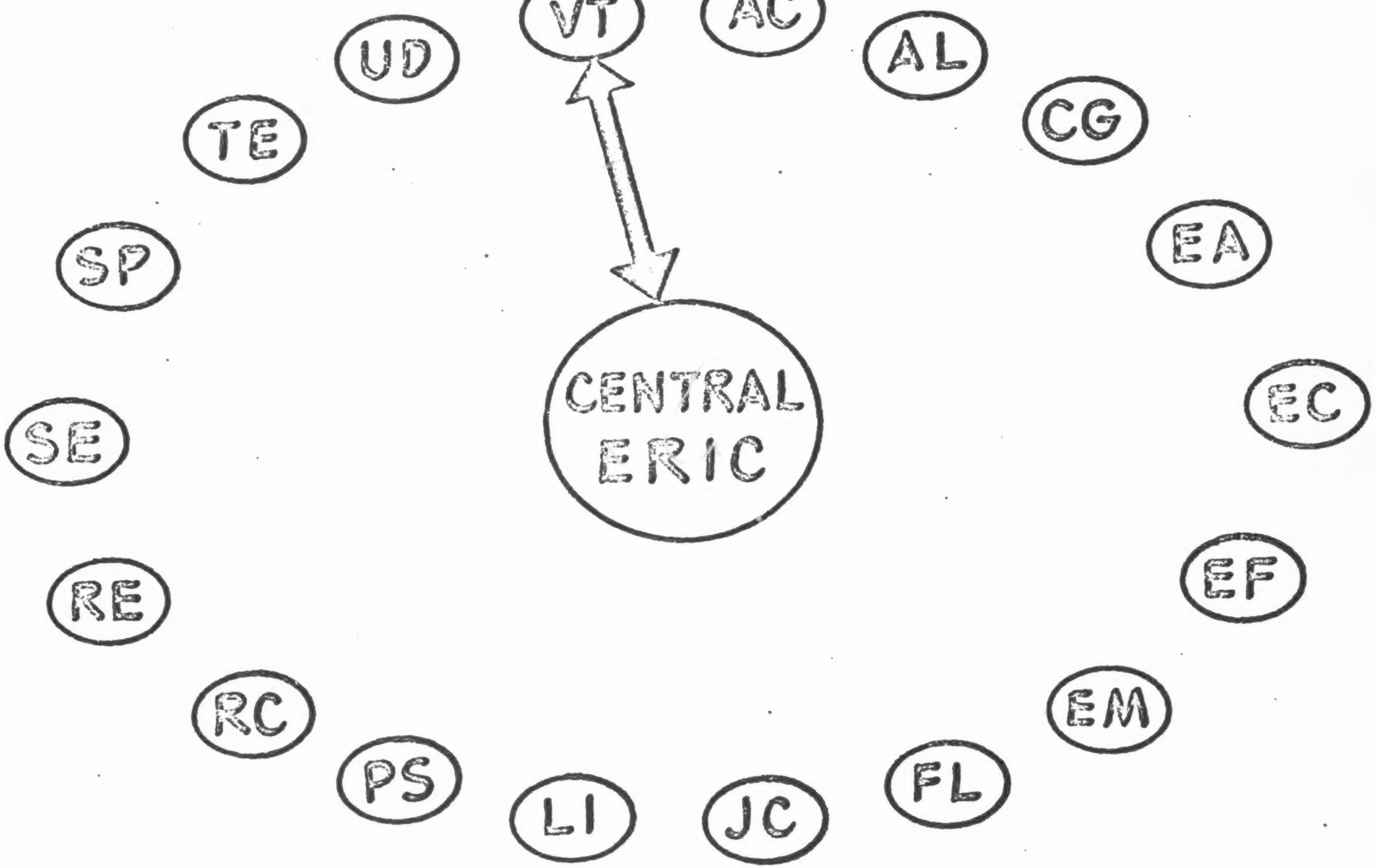
ILLUSTRATION 1

THE CENTER FOR VOCATIONAL AND TECHNICAL EDUCATION



1. RESEARCH
   - CRITICAL PROBLEM SITUATIONS
   - PROGRAM IMPROVEMENT
   - NEW KNOWLEDGE & APPLICATIONS
2. LEADERSHIP DEVELOPMENT
   - ADVANCED STUDIES
   - IN-SERVICE PROGRAMS
3. INFORMATION
   - STORAGE
   - RETRIEVAL
   - DISSEMINATION

THE ERIC SYSTEM



CENTRAL ERIC
VT
AC
AL
CG
EA
EC
EF
EM
FL
JC
LI
PS
RC
RE
SE
SP
TE
UD

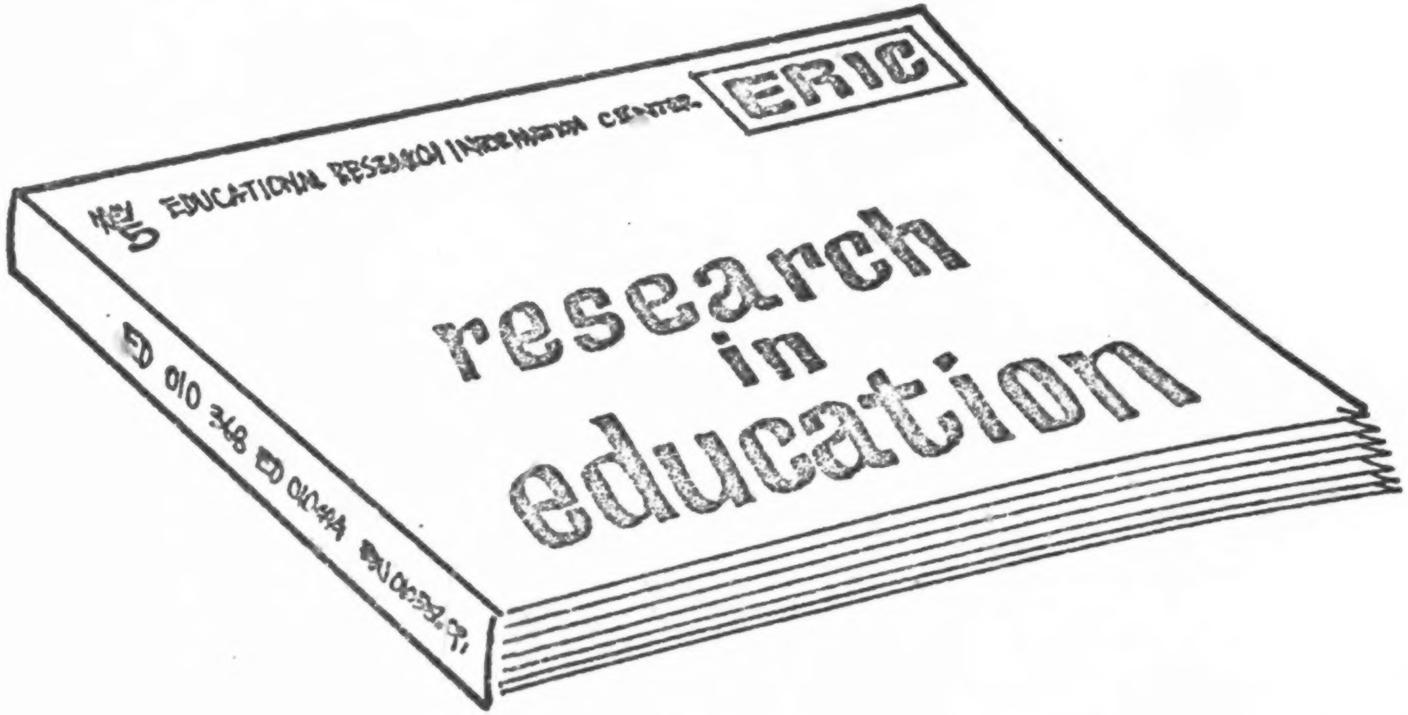
ILLUSTRATION 3

AC	ADULT AND CONTINUING EDUCATION - SYRACUSE U. - SYRACUSE, N.Y.
AL	LINGUISTICS & THE UNCOMMONLY TAUGHT LANGUAGES CENTER FOR APPLIED LINGUISTICS-WASH., D.C.
CG	COUNSELING AND PERSONNEL SERVICES UNIV. OF MICHIGAN, ANN ARBOR
EA	EDUCATIONAL ADMIN. - U. OF OREGON - EUGENE
EC	EXCEPTIONAL CHILDREN - COUNCIL OF EXCEPTIONAL CHILDREN - WASHINGTON, D.C.
EF	EDUCATIONAL FACILITIES - U. OF WISC. - MADISON
EM	EDUCATIONAL MEDIA AND TECHNOLOGY STANFORD UNIV. - STANFORD, CALIF.
FL	TEACHING OF FOREIGN LANGUAGES - MODERN LANGUAGE ASSOC. OF AMERICA - NEW YORK

ILLUSTRATION 4

JC	JUNIOR COLLEGES - U. OF CALIF. - LOS ANG.
LI	LIBRARY & INFORMATION SCIENCES U. OF MINNESOTA - MINNEAPOLIS
PS	EARLY CHILDHOOD - U. OF ILLINOIS - URBANA
RC	SMALL SCHOOL & RURAL COMPENSATORY EDUCATION - NEW MEXICO ST. U. - LAS CRUCES
RE	READING - INDIANA U. - BLOOMINGTON
SE	SCIENCE EDUCATION - OHIO ST. U. - COLUMBUS
SP	SCHOOL PERSONNEL - TO BE DESIGNATED
TE	TEACHING OF ENGLISH - NATIONAL COUNCIL OF TEACHERS OF ENGLISH - CHAMPAIGN, ILL.
UD	URBAN DISADVANTAGED - YESHIVA U. - NEW YORK
VT	VOCATIONAL AND TECHNICAL EDUCATION OHIO STATE UNIV. - COLUMBUS

ILLUSTRATION 5


NOV 5
EDUCATIONAL RESEARCH INFORMATION CENTER
ERIC
research in education
ED 010 348 ED 010 44A

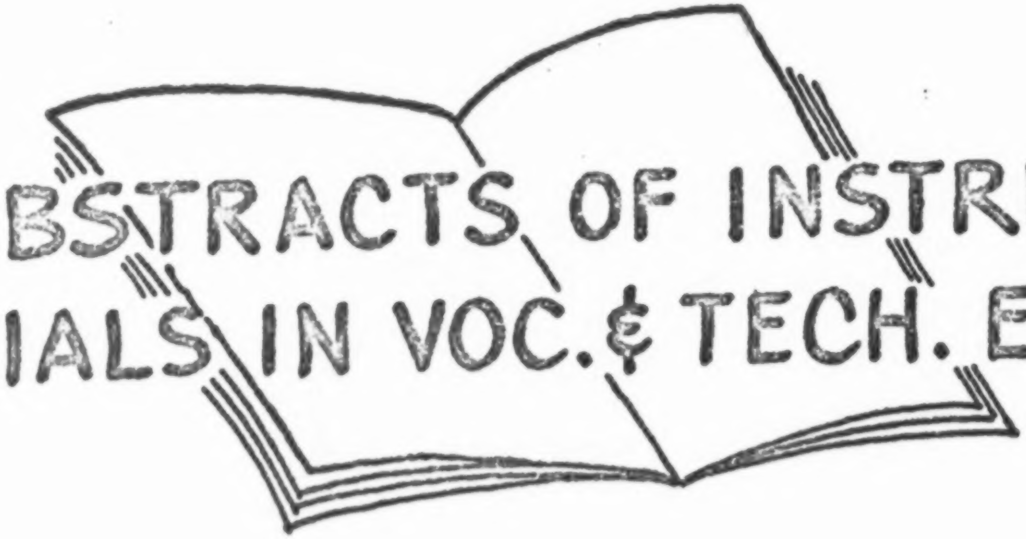
INFORMATION ON COMPLETED RESEARCH

ABSTRACTS
INDEXES

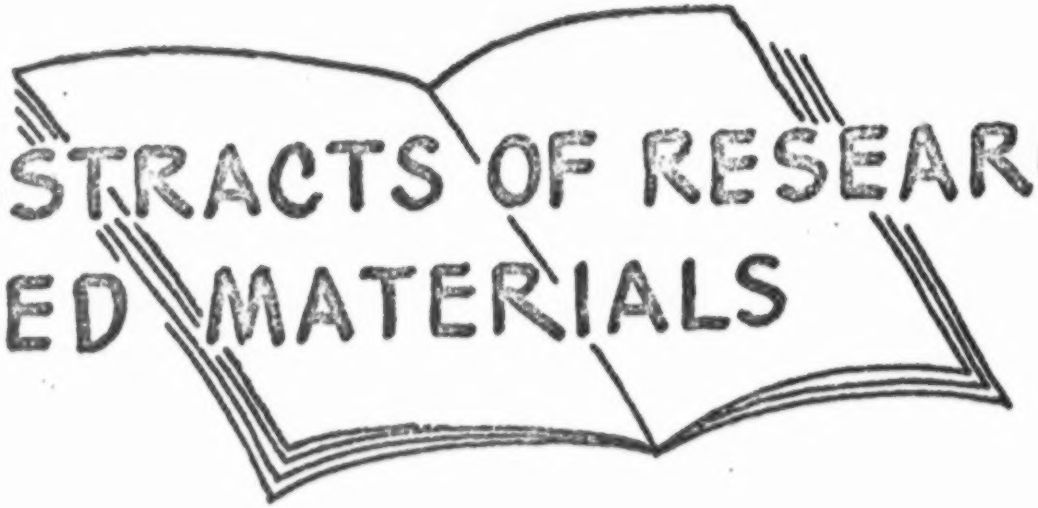
INFORMATION ON ONGOING RESEARCH

ABSTRACTS
INDEXES

ILLUSTRATION 6



AIM - ABSTRACTS OF INSTRUCTIONAL MATERIALS IN VOC. & TECH. EDUCATION



ARM - ABSTRACTS OF RESEARCH AND RELATED MATERIALS

REPORT INFORMATION AVAILABLE
MULTIPLE INDEXING OF TOPICS

ILLUSTRATION 7

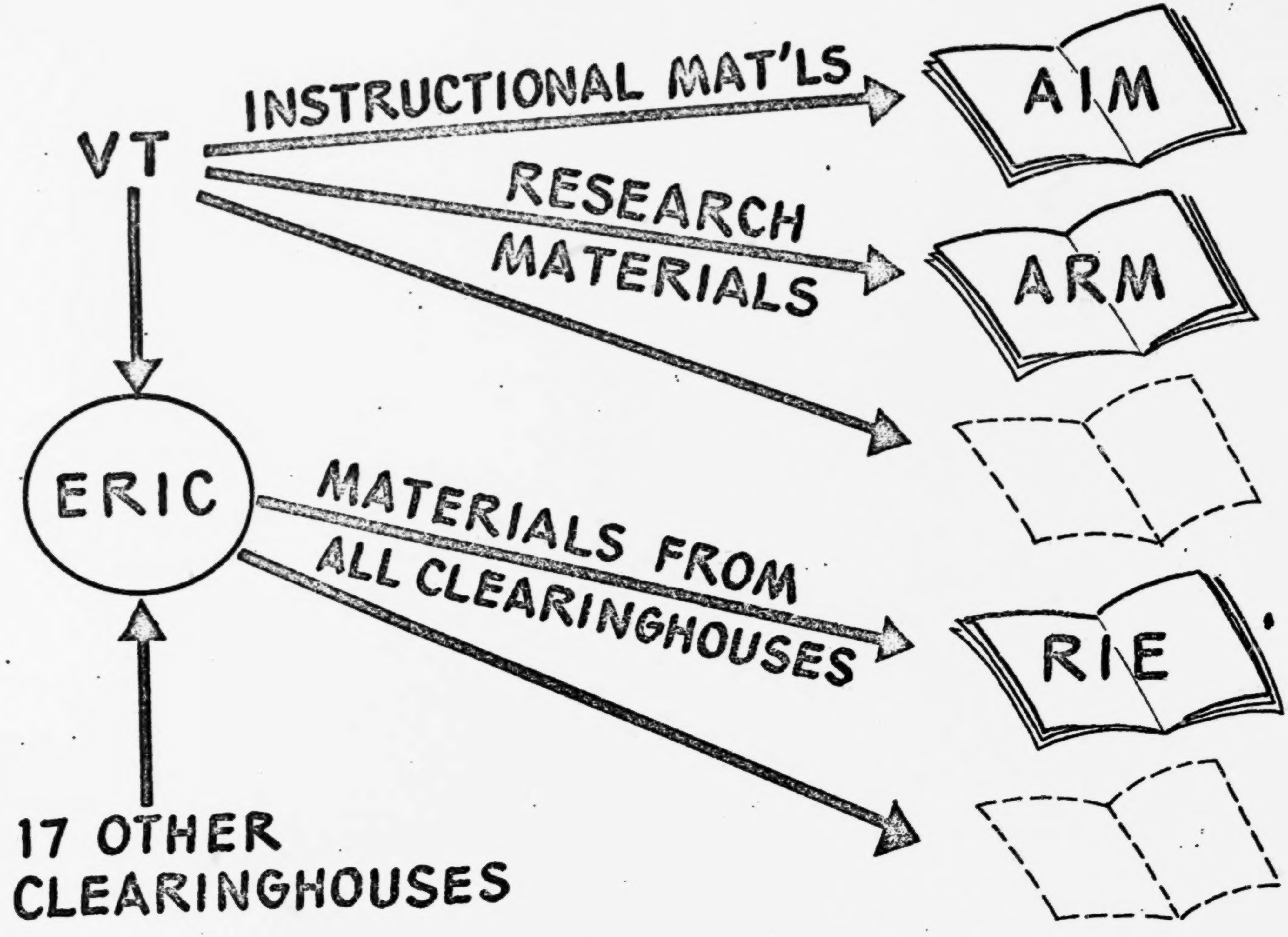

VT
INSTRUCTIONAL MAT'LS
AIM
RESEARCH MATERIALS
ARM
ERIC
MATERIALS FROM ALL CLEARINGHOUSES
RIE
17 OTHER CLEARINGHOUSES

ILLUSTRATION 8

VT 000 493 ED 012 313

The Partnership Vocational Education Project, A New Program in Industrial-Technical Education, A Proposal Presented to and Accepted by the Ford Foundation.

Minelli, Ernest L.

Central Michigan Univ., Mount Pleasant

65

EDRS Price MF-$0.25 HC-$0.68 17p.

---

*INDUSTRIAL EDUCATION, *TECHNICAL EDUCATION, *VOCATIONAL EDUCATION, CURRICULUM PLANNING, *TEACHER EDUCATION, *INSERVICE TEACHER EDUCATION,

Central Michigan University, Michigan,

The proposed program to improve industrial-technical education will function on [illegible] levels -- university, community college, and high school. In grades 9 and 10 the program will [illegible] of a [illegible] of [illegible]. In grades 11 and 12 there will be a 2 year sequence of four [illegible] in English, [illegible] [illegible] [illegible] [illegible] subject

ILLUSTRATION 9

VT 000 460 ED

Report of Second Research Coordination Conference on Agricultural Occupations. January 13-15, 1964, The Ohio State University, Columbus. Summarization Procedures. Guidelines for Pilot Programs.

Ohio State Univ., Columbus. The Nat. Center in Agr. Educ.

64

EDRS Price MF-$0.18 HC-$3.64 91 p.

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*AGRICULTURAL EDUCATION, *RESEARCH METHODOLOGY, *OFF FARM AGRICULTURAL OCCUPATIONS, DATA PROCESSING, *PILOT PROJECTS, GUIDELINES, EVALUATION METHODS,

---

The primary focus of this conference was on summarization procedures for agricultural occupations studies and guidelines for pilot programs [illegible] [illegible] [illegible] by approximately 85 persons [illegible] 21 [illegible] [illegible] the U.S. Office of Education. The major [illegible] are -- (1) summarization tables for agricultural occupations data (2) [illegible] [illegible] [illegible] [illegible] [illegible] [illegible], and (3) guidelines for pilot programs in agricultural education. The [illegible] [illegible] [illegible] definitions of employment levels in-[illegible] [illegible] of selected [illegible]

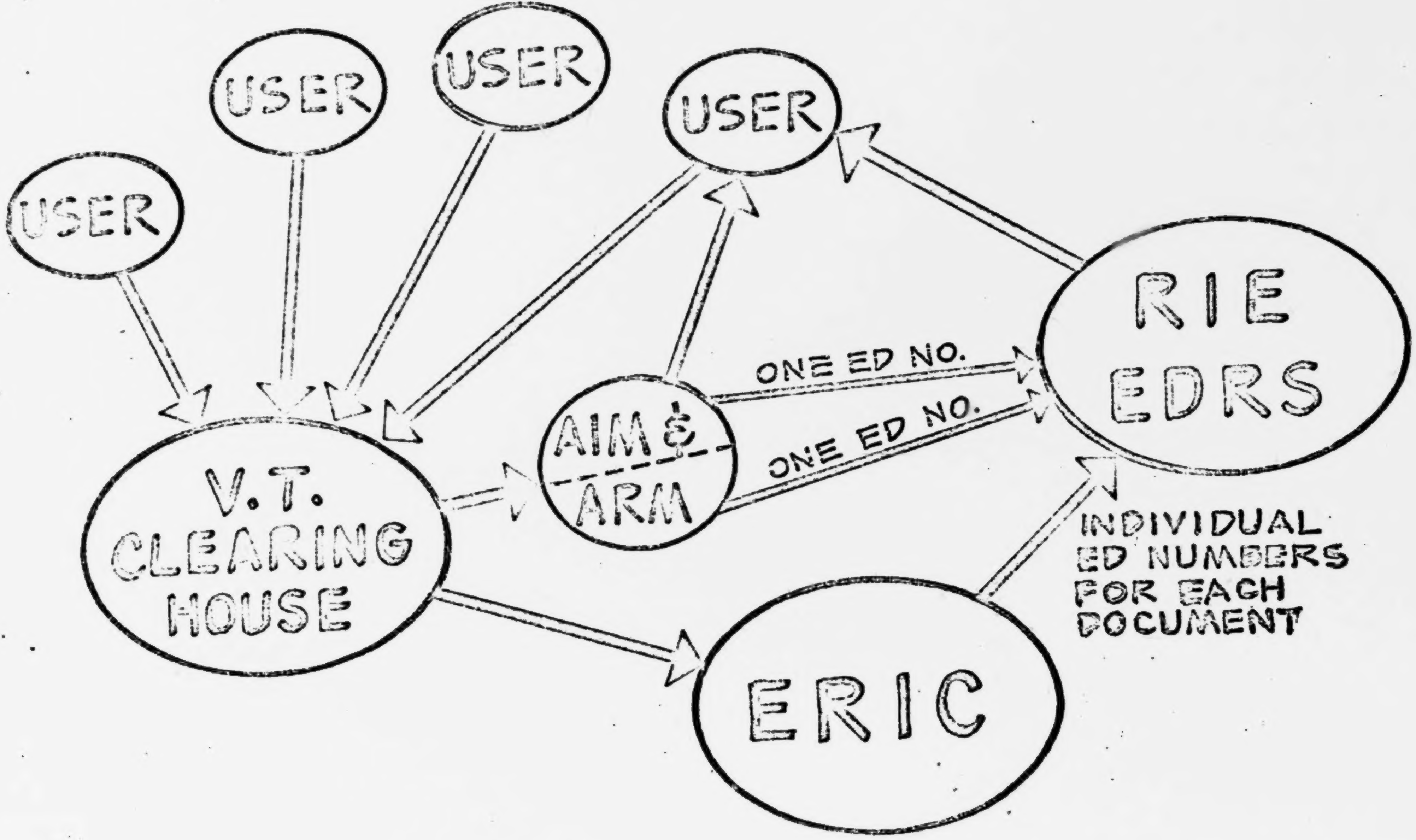
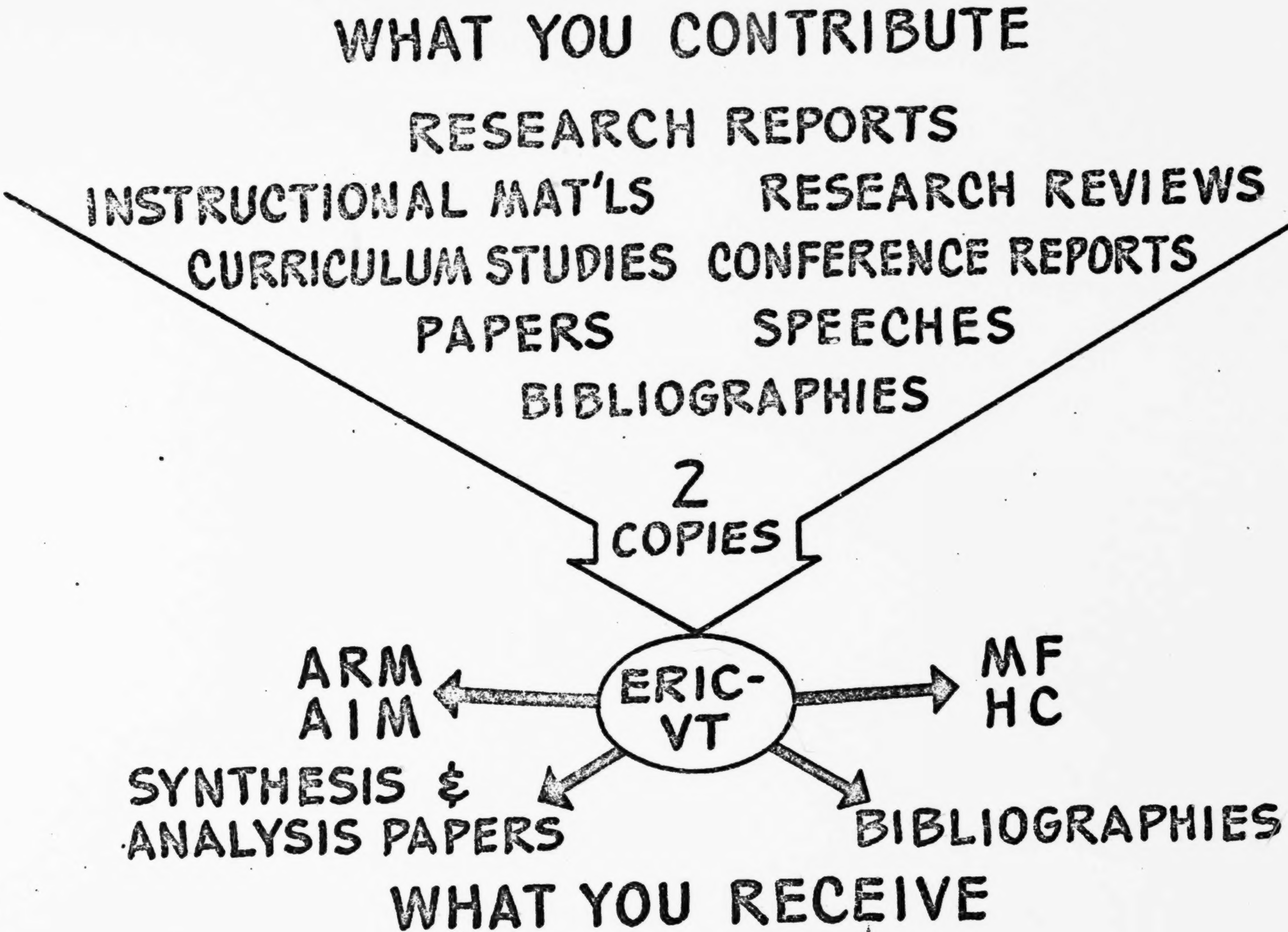

USER
USER
USER
USER
V.T. CLEARING HOUSE
AIM & ARM
ONE ED NO.
ONE ED NO.
RIE EDRS
INDIVIDUAL ED NUMBERS FOR EACH DOCUMENT
ERIC

ILLUSTRATION 11



WHAT YOU CONTRIBUTE

RESEARCH REPORTS

INSTRUCTIONAL MAT'LS

RESEARCH REVIEWS

CURRICULUM STUDIES

CONFERENCE REPORTS

PAPERS

SPEECHES

BIBLIOGRAPHIES

2 COPIES

ERIC-VT

ARM
AIM

MF
HC

SYNTHESIS & ANALYSIS PAPERS

BIBLIOGRAPHIES

WHAT YOU RECEIVE

APPENDIX E

Publications of The Center for Vocational and Technical Education

Garbin, A. P., Campbell, Robert E., and Jackson, Dorothy P. Worker Adjustment: Youth in Transition from School to Work. Columbus, Ohio: The Center for Vocational and Technical Education, The Ohio State University, 1967. (Bibliography Series No. 2)

Vivian, Neal E., and Hoffman, Kenneth E. Vocational-Technical Teacher Education: National Seminar Proceedings. Columbus, Ohio: The Center for Vocational and Technical Education, The Ohio State University, February, 1968. (Leadership Series No. 15)

Abstracts of Instructional Materials in Vocational and Technical Education. Columbus, Ohio: The Center for Vocational and Technical Education, The Ohio State University. Quarterly, Summer, 1968.

Abstracts of Research and Related Materials in Vocational and Technical Education. Columbus, Ohio: The Center for Vocational and Technical Education, The Ohio State University. Quarterly, Summer, 1968.

APPENDIX F

II ABSTRACT

Project Agriculture
A Program for Curriculum Development in Vocational Education

PRINCIPAL INVESTIGATOR:	James W. Hensel, Specialist, Agricultural Education, The Center for Vocational and Technical Education (614) 293-7351
PROJECT COORDINATOR:	Richard H. Wilson, Associate Professor, Agricultural Education, The Ohio State University
CONTRACTING AGENCY:	The Center for Vocational and Technical Education The Ohio State University 980 Kinnear Road, Columbus, Ohio 43212
PROJECT DURATION:	October 1, 1968 to June 30, 1975

STATEMENT OF THE PURPOSES:

The major purpose of this project is to accomplish a comprehensive and nationwide effort to determine the nature and extent of educational needs uniquely associated with employment opportunities in the farm and off-farm agricultural industry and to develop appropriate curricular programs for each of the seven areas of agricultural instruction in vocational education. The task has been identified and would be accomplished through the cooperative efforts of The Center for Vocational and Technical Education, The Departments of Agriculture, Commerce, Education and Labor. The appropriate capabilities of various research agencies in a number of universities and states throughout the nation would be called upon for efforts coordinated by The Center.

EXPECTED CONTRIBUTION TO EDUCATION:

The project will provide a model for all vocational services in the development of nationwide efforts to determine occupational opportunities and training needs. The design of a taxonomy of agricultural occupations and the multi-state effort to develop curriculum guides for areas of occupational instruction in agriculture will provide experience and example for all areas of vocational education. The project would further provide for the development of performance standards and performance tests for assessing the validity and effectiveness of instructional programs in agriculture.

PROCEDURES OR DESCRIPTION

The project has been designed to include four major phases over a five-year period. The initial effort will be the development of a taxonomy of job titles arranged by appropriate training programs of agricultural instruction together with a handbook of job descriptions. The second phase will include a census of employment opportunities and training needs in the agricultural industry which would establish a base for curriculum development. The third phase would include the development of curriculum guides and programs for the seven areas of agricultural instruction through the involvement of teachers in design, trial, and revision. The fourth and final phase will provide for curriculum dissemination, research, and renewal through curriculum materials centers for each area.

APPENDIX G

Contributors To Center Activities and Projects

Development of Facility Planning Guides for Vocational and Technical Education Facilities

Mr. Jon P. Adams, Dean, Technical-Vocational Instruction, Schoolcraft College, Livonia, Michigan

Dr. Walter Collins, Head, Animal Science Department, Agricultural and Technical College, Delhi, New York

Mr. Carl German, Department Head, Norwalk Technical College, Norwalk, Connecticut

Dr. Milton E. Larson, Professor, Colorado State University, Fort Collins, Colorado

Dr. James MacConnell, Director, School Planning Laboratory, Stanford University, Stanford, California

Dr. William A. McIntosh, Associate Professor, Trades & Industrial Department, School of Education, North Carolina State University, Raleigh, North Carolina

Dr. William Selden, State Director, Business and Office Education, Department of Public Instruction, Harrisburg, Pennsylvania

Mr. L. J. Sitterlee, Chairman, Electrical Technology Department, Broome County Technical College, Binghamton, New York

The Modification of the Perceptions Held by Disadvantaged Youth Toward Office Work

Mr. Albert C. Masterson, Associate Professor, Business and Office Education, Department of Vocational Education, Colorado State University, Fort Collins, Colorado

Second Annual National Vocational-Technical Teacher Education Seminar

Dr. Dwight Allen, Dean of Education, University of Massachusetts, Amherst, Massachusetts

Professor L. O. Andrews, Teacher Educator, Teacher Education Department, The Ohio State University, Columbus, Ohio

Dr. Herbert D. Brum, Assistant Supervisor for Vocational Education, State Department of Education, Columbus, Ohio

Dr. Flossie Byrd, Dean, School of Home Economics, Prairie View A & M College, Prairie View, Texas

Dr. Marjorie East, Head, Department of Home Economics Education, Pennsylvania State University, University Park, Pennsylvania

Dr. Lawrence Erickson, Teacher Educator, Department of Business Education, University of California, Los Angeles, California

Dr. Edmund Gordon, Director of the ERIC Clearinghouse for the Disadvantaged, Yeshiva University, New York, New York

Dr. Marvin Hirshfeld, Chairman, Department of Distributive Education, Temple University, Philadelphia, Pennsylvania

Dr. Elizabeth Kerr, State Consultant, Health Occupations Education Section, Iowa Department of Public Instruction, Iowa City, Iowa

Dr. Lloyd J. Phipps, Professor and Chairman, Division of Agricultural Education, University of Illinois, Urbana, Illinois

Dr. Carl Schaefer, Chairman, Department of Vocational-Technical Education, Rutgers University, New Brunswick, New Jersey

Mrs. Mamie Sizemore, Indian Education Consultant, Arizona State Department of Education, Phoenix, Arizona

National Program Development Institutes in Technical Education

Mr. Axford Beagle, Chairman, PreTechnical Program, Broome Technical Community College, Binghamton, New York

Dr. Walter Brooking, Technical Education Specialist, Division of Vocational and Technical Education, U. S. Office of Education, Washington, D. C.

Mr. Raymond S. Chase, Vice President for Marketing and Retailing, Dundee Cement Company, Ann Arbor, Michigan

Mr. Paul W. Davis, Director Hospitality and Community Service Occupations, Washtenaw Community College, Ann Arbor, Michigan

Mr. Charles Lawrence Dugan, Conference Evaluator, Ann Arbor, Michigan

Dr. Roy Dugger, Vice President and Director, James Connally Technical Institute of Texas A & M University, Waco, Texas

Mr. Herb Ellis, Vice-Chairman, Washtenaw County Board of Supervisors, Ann Arbor, Michigan

Mr. Douglas M. Fellows, Administration Director, Ward Technical Institute, Hartford, Connecticut

Mr. Andrew F. Ford, Director, Technical Division, Washtenaw Community College, Ann Arbor, Michigan

Mr. Lewis H. Hodges, Department Chairman, Department of Vocational Education and Practical Arts, University of Michigan, Ann Arbor, Michigan

Dr. Paul Hunt, Dean, Occupational Studies, Washtenaw Community College, Ann Arbor, Michigan

Mr. Robert Knoebel, Assistant Director, Bureau of Community Colleges, Commonwealth of Pennsylvania, Department of Public Instruction, Harrisburg, Pennsylvania

Dr. George McNelly, Dean, School of Technology, Purdue University, Lafayette, Indiana

Dr. George S. O'Diorne, Director, Bureau of Industrial Relations, University of Michigan, Ann Arbor, Michigan

Dr. Michael Radock, Vice President for University Relations, University of Michigan, Ann Arbor, Michigan

Dr. Warren Rhodes, Consultant, Educational Relations Operation, General Electric Corporation, Ossining, New York

Mr. Harold J. Schantz, State Supervisor for Facilities, State Board of Vocational and Technical Education, Technical and Adult Education, Madison, Wisconsin

Professor Ralph Wenrich, Director, Leadership Development Program for Vocational and Technical Education, University of Michigan, Ann Arbor, Michigan

Professor George Whitney, Chairman, Engineering Technology Division, State University of New York Agricultural and Technical College, Alfred, New York

APPENDIX H

Consulting Specialists

Development of a Model to Evaluate State Programs of Vocational and Technical Education

Dr. Albert E. Jochen, Retired State Director of Vocational Education, State Department of Education, Trenton, New Jersey

The Problems and Meanings of Occupational Goal Development of Disadvantaged Junior High School Students

Dr. Sam H. Osipow, Associate Professor, Department of Psychology, The Ohio State University, Columbus, Ohio

The Modification of the Perceptions Held by Disadvantaged Youth Toward Office Work

Mrs. Celestine Mongo, Teacher, Business Education Department, Northern High School, Detroit, Michigan

Miss Rosalind Sanders, Teacher, Business Education Department, West Philadelphia High School, Philadelphia, Pennsylvania

Mr. Alvin Vaughn, Teacher, Business Education Department, West Philadelphia High School, Philadelphia, Pennsylvania

Mrs. Vastene Woodhouse, Teacher, Business Education Department, Northern High School, Detroit, Michigan

A Planning Study to Determine the Feasibility of Developing a New Business and Office Education Curriculum

Mr. Larry Everett, Research Associate, Business and Office Education Department, University of Michigan, Ann Arbor, Michigan

Mr. Robert VanDyke, Research Associate, Distributive Education Department, University of Michigan, Ann Arbor, Michigan

Dr. Kendrick Bangs, Professor of Office Management, University of Colorado, Boulder, Colorado

Dr. Calfrey Calhoun, Head, Business Education Department, College of Education, University of Georgia, Athens, Georgia

Dr. Lawrence Erickson, Assistant Dean, School of Education, University of California, Los Angeles, California

Dr. Frank Lanham, Professor, Business Education Department, Wayne State University, Detroit, Michigan

Dr. Ray Price, Head, Business Education Department, College of Education, University of Minnesota, Minneapolis, Minnesota

Development of Facility Planning Guides for Vocational and Technical Education Facilities

Miss Marianne Andrews, State Supervisor, Home Economics Education, State Board of Vocational Education, Olympia, Washington

Dr. Kathren Dennis, State Supervisor, Home Economics, Division of Vocational Education, Raleigh, North Carolina

Mr. Alexander Ducat, Program Officer, Equipment and Facilities Unit, U. S. Office of Education, Washington, D. C.

Mrs. Gladys Grabe, Chief, Home Economics Education, State Board of Vocational Education, Des Moines, Iowa

Dr. Jerry Halterman, Professor, Agricultural Education, The Ohio State University, Columbus, Ohio

Mrs. Marlene Jones, Instructor, Penta County Joint Vocational School, Penta County, Perrysburg, Ohio

Mr. Theodore Koschler, Vice President, Miami-Dade Junior College, Miami, Florida

Dr. Berenice Mallory, Chief, Home Economics Education, Division of Vocational-Technical Education, U. S. Office of Education, Washington, D. C.

Mr. Fred Manley, Supervisor, Agricultural Program, Department of Community Colleges, Raleigh, North Carolina

Mr. William Martin, President, Central Carolina Institute, Sanford, North Carolina

Mr. Russell Mercer, State Supervisor of Office and Business Occupations, State Department of Education, Atlanta, Georgia

Mr. Kenneth Olson, Coordinator, Occupational Education, Department of Community Colleges, Raleigh, North Carolina

Mr. Michael Russo, Assistant Director, Facilities Planning and Development Section, Program Planning and Development Branch, U. S. Office of Education, Washington, D. C.

Mr. John Standridge, Director, Division of Vocational-Technical and Adult Education, Atlanta Public Schools, Atlanta, Georgia

Miss Ruth Stovall, State Supervisor, Home Economics Education, State Department of Education, Montgomery, Alabama

Mr. William Taylor, President, Technical Institute of Alamance, Burlington, North Carolina

Mr. Lowell A. Welsh, Director, Nebraska Vocational-Technical School, Milford, Nebraska

Miss Janet Wilson, Director, Home Economics Education, Division of Vocational Education, Lincoln, Nebraska

Mr. Roger Worthington, Coordinator of Curriculum Laboratory, State Department of Community Colleges, Raleigh, North Carolina

An Evaluation of the Application of Selected Teacher Education Technique Variables Involving Videotape Recording and/or Micro-Teaching in Vocational and Technical Teacher Education

Dr. Durwin Hanson, Professor and Head, Department of Industrial and Technical Education, North Carolina State University, Raleigh, North Carolina

Dr. Gordon McMahon, Director, Division of Vocational Technical Education, State University College, Oswego, New York

Common and Unique Elements of Vocational and Technical Teacher Education

Dr. Mary H. Haas, Professor, Department of Vocational and Technical Education, Colorado State University, Fort Collins, Colorado

APPENDIX I

Institutional Participants in Center Projects

The Modification of the Perceptions Held by Disadvantaged Youth Toward Office Work

Detroit, Michigan Public Schools (Celestine Mongo)

Hunter College of The City University of New York (Estelle Popham)

Laredo, Texas Public Schools (Maya Guerra)

Philadelphia, Pennsylvania Public Schools (Alvin Vaughn)

San Francisco State College (William L. Winnett)

Temple University (Robert A. Schultheis)

A Planning Study to Determine the Feasibility of Developing a New Business and Office Education Curriculum

University of Michigan (Frank Lanham)

Wayne State University (Fred Cook)

Development of Facility Planning Guides for Vocational and Technical Education Facilities

Agricultural and Technical College (Walter Collins)

Broome County Technical College (L. J. Sitterlee)

Colorado State University (Milton E. Larson)

North Carolina State University (William McIntosh)

Norwalk Technical College (Carl German)

Pennsylvania Department of Public Instruction (William Selden)

Schoolcraft College (Jon P. Adams)

Stanford University (James MacConnell)

Worker Adjustment: Transition from School to Work

Louisiana State University in New Orleans (J. J. Salomone)

Virginia Polytechnic Institute (J. A. Ballweg)

National Program Development Institutes in Technical Education

James Connally Technical Institute of Texas A & M University (Roy W. Dugger)

University of Michigan (Joseph P. Arnold, Norman C. Harris)

APPENDIX J

Articles, Papers and Other Publications Prepared by Center Staff Members

Cotrell, C. J. Directory of T & I Researchers. Washington, D. C.: The American Vocational Associations Inc., 1968.

Huffman, H. Twiss, Ruth, and Whale, L. J. Mathematics for Business Occupations. New York: McGraw-Hill Book Co., 1968.

Stogdill, R. M. Leadership, Membership and Organization. In Contemporary Issues in Social Psychology. Edited by L. S. Wrightsman. Belmont, California: Brooks-Cole, 1968.

Stogdill, R. M. Basic Concepts for a Theory of Organization. In Management Control Through Communication. Edited by G. T. Vardaman and C. C. Halterman. New York: Wiley, 1968.

APPENDIX K

Major Presentations to Professional Groups by Center Staff Members

Cotrell, C. J.

"Applications of Videotape Recording and Micro-Teaching in Trade and Industrial Teacher Education." Paper presented at a meeting of the State Staff for Trade and Industrial Education, Columbus, Ohio, April, 1968.

Cotrell, C. J.

"The Differences in the Training Needs of High School and Post High School T & I Teachers." Paper presented at the National Institute on the Recruitment, Selection and Training of Teachers of Trade and Industrial Education, The University of Kentucky, Lexington, Kentucky, June, 1968.

Hensel, J. W.

"Recruitment of Teachers for Vocational and Technical Education." Presented at the USOE meeting in Chicago, Illinois - Teacher Education Seminar, April 30-May 2, 1968.

Hensel, J. W.

"Future Programs in Agricultural Education." Paper presented to the Committee on Agriculture, CEANAR - National Academy of Sciences, Tucson, Arizona, May, 1968.

Miller, A. J.

"The Technical Student." Paper presented at the Tennessee Vocational-Technical Educational Conference, Knoxville, Tennessee, June 11, 1968.

Taylor, R. E.

"ERIC--The National Information System for American Education: Its Implications for Industrial Arts." Paper presented at the meeting of the American Industrial Arts Association, Minneapolis, Minnesota, May, 1968.

Wilson, C. I.

"Use of the Computer and Storage and Retrieval of Data." Paper presented at the meeting of the Home Economics Research Conference, Minneapolis, Minnesota, June 28, 1968.